

TEST REPORT

Reference No. : WTD21D01009766W003 V1
FCC ID : 2ADCS6720
Applicant : Inforce Computing Inc.
Address : 48820 Kato Road, Ste 600B, Fremont, CA94538, United States of America.
Manufacturer : Inforce Computing Inc.
Address : 48820 Kato Road, Ste 600B, Fremont, CA94538, United States of America.
Product : Application Ready Platform 6720
Model(s) : 6720
Brand name : Smart
Standards : FCC CFR47 Part 15 E Section 15.407
Date of Receipt sample : 2021-02-19
Date of Test : 2021-02-20 to 2021-04-06
Date of Issue : 2021-05-12
Test Result : Pass

Remarks:

The results shown in this test report refer only to the sample(s) tested, this test report cannot be reproduced, except in full, without prior written permission of the company.

The report would be invalid without specific stamp of test institute and the signatures of compiler and approver.

Prepared By:

Waltek Testing Group Co., Ltd.

Address: No. 77, Houjie Section, Guantai Road, Houjie Town, Dongguan City, Guangdong, China

Tel: +86-769-2267 6998

Fax: +86-769-2267 6828

Compiled by:

Levi Xiao

Levi Xiao / Project Engineer

Approved by:

Daniel Liu



Daniel Liu / Designated Reviewer

2 Contents

	Page
1 COVER PAGE.....	1
2 CONTENTS	2
3 REVISION HISTORY	3
4 GENERAL INFORMATION.....	4
4.1 GENERAL DESCRIPTION OF E.U.T.	4
4.2 DETAILS OF E.U.T.	4
4.3 CHANNEL LIST.....	5
5 TEST MODE DESCRIPTION:	7
5.1 TEST FACILITY.....	7
6 EQUIPMENT USED DURING TEST	8
6.1 EQUIPMENTS LIST	8
6.2 DESCRIPTION OF SUPPORT UNITS	9
6.3 MEASUREMENT UNCERTAINTY	9
6.4 TEST EQUIPMENT CALIBRATION	9
7 TEST SUMMARY	10
8 RADIATED EMISSIONS.....	11
8.1 EUT OPERATION.....	11
8.2 TEST SETUP	12
8.3 SPECTRUM ANALYZER SETUP	13
8.4 TEST PROCEDURE	14
8.5 CORRECTED AMPLITUDE & MARGIN CALCULATION	14
8.6 SUMMARY OF TEST RESULTS.....	15
9 DUTY CYCLE.....	27
9.1 SUMMARY OF TEST RESULTS.....	28
10 BAND EDGE	42
10.1 TEST PRODUCE	42
10.2 TEST RESULT	43
11 6 DB BANDWIDTH.....	91
11.1 TEST PROCEDURE:.....	91
11.2 TEST RESULT:	91
TABLE 1:ANTENNA 0.....	91
TABLE 2:ANTENNA 1.....	91
12 26 DB BANDWIDTH AND 99% OCCUPIED BANDWIDTH	106
12.1 TEST PROCEDURE:.....	106
12.2 TEST RESULT:	106
13 CONDUCTED OUTPUT POWER	169
13.1 TEST PROCEDURE:.....	169
13.2 TEST RESULT :	170
14 POWER SPECTRAL DENSITY	233
14.1 TEST PROCEDURE:.....	233
14.2 TEST RESULT:	234
15 FREQUENCY STABILITY.....	298
16 ANTENNA REQUIREMENT	299
17 PHOTOGRAPHS OF TEST SETUP AND EUT.....	300

3 Revision History

Test report No.	Date of Receipt sample	Date of Test	Date of Issue	Purpose	Comment	Approved
WTD21D01009766 W003	2021-02-19	2021-02-20 to 2021-04-06	2021-04-06	original	-	Replaced
WTD21D01009766 W003 V1	2021-02-19	2021-02-20 to 2021-04-06	2021-05-12	Version 1	Updated	Valid

4 General Information

4.1 General Description of E.U.T.

Product:	Application Ready Platform 6720
Model(s):	6720
Wi-Fi Specification:	2.4G-802.11b/g/n HT20/n HT40 5G-802.11a/n/ac HT20 /n/ac HT40 /ac HT80
Bluetooth Version:	Bluetooth v5.0 with BLE
GPS:	Support
Hardware Version:	6720-P2
Software Version:	Android Q 10.0

4.2 Details of E.U.T.

Operation Frequency:	802.11a/n/ac (HT20): U-NII-1: 5150-5250MHz, U-NII-2A: 5250-5350MHz(DFS), U-NII-2C: 5470-5725MHz(DFS), U-NII-3: 5725-5850MHz 802.11n/ac (HT40): U-NII-1: 5190-5230MHz, U-NII-2A: 5270-5310MHz(DFS), U-NII-2C: 5510-5670MHz(DFS), U-NII-3: 5755-5795MHz 802.11ac (HT80): U-NII-1: 5210MHz, U-NII-2A: 5290MHz(DFS), U-NII-2C: 5530-5610MHz, U-NII-3: 5775MHz
Max. RF output power:	ANT 0: 17.21dBm ANT 1: 16.71dbm Total:19.88dBm
Type of Modulation:	OFDM
Antenna installation:	External antenna with RP-SMA connector
Antenna Gain:	4.5dBi
Ratings:	DC 12V For Battery

4.3 Channel List

U-NII-1 (5.15-5.25GHz)			
channel	Frequency(MHz)	channel	Frequency(MHz)
36	5180	38	5190
40	5200	42	5210
44	5220	46	5230
48	5240		

U-NII-2A (5.25-5.35GHz)			
channel	Frequency(MHz)	channel	Frequency(MHz)
52	5260	54	5270
56	5280	58	5290
60	5300	62	5310
64	5320		

U-NII-2C (5.47-5.725GHz)			
channel	Frequency(MHz)	channel	Frequency(MHz)
100	5500	102	5510
104	5520	108	5540
110	5550	112	5560
116	5580	118	5590
120	5600	124	5620
126	5630	128	5640
132	5660	134	5670
136	5680	140	5700

U-NII-3 (5.725-5.85GHz)			
channel	Frequency(MHz)	channel	Frequency(MHz)
149	5745	151	5755
153	5765	155	5775
157	5785	159	5795
161	5805	165	5825

In section 15.31(m), regards to the operating frequency range over 10 MHz, the Lowest frequency, the middle frequency, and the highest frequency of channel were selected to perform the test, and the selected channel see below:

For 802.11a/n/ac(HT20):

channel	Frequency(MHz)	channel	Frequency(MHz)
36	5180	40	5200
48	5240		

channel	Frequency(MHz)	channel	Frequency(MHz)
52	5260	56	5280
64	5320		

channel	Frequency(MHz)	channel	Frequency(MHz)
100	5500	120	5600
140	5700		

channel	Frequency(MHz)	channel	Frequency(MHz)
149	5745	157	5785
165	5825		

For 802.11n/ac(HT40)/ ac(HT80):

channel	Frequency(MHz)	channel	Frequency(MHz)
38	5190	42	5210
46	5230		

channel	Frequency(MHz)	channel	Frequency(MHz)
54	5270	58	5290
62	5310		

channel	Frequency(MHz)	channel	Frequency(MHz)
102	5510	106	5530
110	5550	134	5670

channel	Frequency(MHz)	channel	Frequency(MHz)
151	5755	155	5775
159	5795		

5 Test Mode Description:

During testing, Channel and Power Controlling Software provided by the customer was used to control the operating channel as well as the output power level. The RF output power selection is for the setting of RF output power expected by the customer and is going to be fixed on the firmware of the final end product.

Transmitting duty cycle is no less 98%.

The software is installed in operation system, named "QRCT4.exe", Version 4

Test Items	Mode	Data Rate	TX/RX
Radiated Emissions	802.11a (HT20)	6 Mbps	TX
	802.11n/ac(HT20/40/80)	MCS0	TX
Duty Cycle	802.11a (HT20)	6 Mbps	TX
	802.11n/ac(HT20/40/80)	MCS0	TX
Band Edge	802.11a (HT20)	6 Mbps	TX
	802.11n/ac(HT20/40/80)	MCS0	TX
6dB Bandwidth	802.11a (HT20)	6 Mbps	TX
	802.11n/ac(HT20/40/80)	MCS0	TX
26dB Bandwidth and 99% Occupied Bandwidth	802.11a (HT20)	6 Mbps	TX
	802.11n/ac(HT20/40/80)	MCS0	TX
Conducted Output Power	802.11a (HT20)	6 Mbps	TX
	802.11n/ac(HT20/40/80)	MCS0	TX
Power Spectral Density	802.11a (HT20)	6 Mbps	TX
	802.11n/ac(HT20/40/80)	MCS0	TX
Frequency Stability	Un-modulation	/	TX

5.1 Test Facility

The test facility has a test site registered with the following organizations:

ISED CAB identifier: CN0013. Test Firm Registration No.: 7760A.

Waltek Testing Group Co., Ltd. Has been registered and fully described in a report filed with the Industry Canada. The acceptance letter from the Industry Canada is maintained in our files.

Registration number 7760A, October 15, 2016.

FCC Designation No.: CN1201. Test Firm Registration No.: 523476.

Waltek Testing Group Co., Ltd. EMC Laboratory has been registered and fully described in a report filed with the (FCC) Federal Communications Commission. The acceptance letter from the FCC is maintained in our files. Registration number 523476, September 10, 2019.

6 Equipment Used during Test

6.1 Equipments List

Conducted Emissions Test Site 1#						
Item	Equipment	Manufacturer	Model No.	Serial No.	Last Calibration Date	Calibration Due Date
1.	EMI Test Receiver	R&S	ESCI	100947	2020-07-30	2021-07-29
2.	LISN	R&S	ENV216	101215	2020-07-30	2021-07-29
3.	Cable	Top	TYPE16(3.5M)	-	2020-07-30	2021-07-29
Conducted Emissions Test Site 2#						
Item	Equipment	Manufacturer	Model No.	Serial No.	Last Calibration Date	Calibration Due Date
1.	EMI Test Receiver	R&S	ESCI	101155	2020-07-30	2021-07-29
2.	LISN	SCHWARZBECK	NSLK 8128	8128-289	2020-07-30	2021-07-29
3.	Limiter	York	MTS-IMP-136	261115-001-0024	2020-07-30	2021-07-29
4.	Cable	LARGE	RF300	-	2020-07-30	2021-07-29
3m Semi-anechoic Chamber for Radiation Emissions Test site 1#						
Item	Equipment	Manufacturer	Model No.	Serial No.	Last Calibration Date	Calibration Due Date
1	EMC Analyzer	Agilent	E7405A	MY45114943	2020-07-30	2021-07-29
2	Active Loop Antenna	Beijing Dazhi	ZN30900A	-	2020-07-30	2021-07-29
3	Trilog Broadband Antenna	SCHWARZBECK	VULB9163	336	2020-07-30	2021-07-29
4	Coaxial Cable (below 1GHz)	Top	TYPE16(13M)	-	2020-07-30	2021-07-29
5	Broad-band Horn Antenna	SCHWARZBECK	BBHA 9120 D	667	2020-07-30	2021-07-29
6	Broad-band Horn Antenna	SCHWARZBECK	BBHA 9170	335	2020-07-30	2021-07-29
7	Broadband Preamplifier	COMPLIANCE DIRECTION	PAP-1G18	2004	2020-07-30	2021-07-29
8	Coaxial Cable (above 1GHz)	Top	1GHz-25GHz	EW02014-7	2020-07-30	2021-07-29
3m Semi-anechoic Chamber for Radiation Emissions Test site 2#						
Item	Equipment	Manufacturer	Model No.	Serial No	Last Calibration Date	Calibration Due Date
1	Test Receiver	R&S	ESCI	101296	2020-07-30	2021-07-29
2	Trilog Broadband Antenna	SCHWARZBECK	VULB9160	9160-3325	2020-07-30	2021-07-29
3	Amplifier	Compliance pirection systems inc	PAP-0203	22024	2020-07-30	2021-07-29
4	Cable	HUBER+SUHNER	CBL2	525178	2020-07-30	2021-07-29

RF Conducted Testing						
Item	Equipment	Manufacturer	Model No.	Serial No.	Last Calibration Date	Calibration Due Date
1.	EMC Analyzer (9k~26.5GHz)	Agilent	E7405A	MY45114943	2020-07-30	2021-07-29
2.	Spectrum Analyzer (9k-6GHz)	R&S	FSL6	100959	2020-07-30	2021-07-29
3.	Signal Analyzer (9k~26.5GHz)	Agilent	N9010A	MY50520207	2020-07-30	2021-07-29

6.2 Description of Support Units

Equipment	Manufacturer	Model No.	Series No.
Computer	Dell	K053	/
Mouse	Lenovo	AP01	/

6.3 Measurement Uncertainty

Parameter	Uncertainty
Radio Frequency	$\pm 1 \times 10^{-6}$
RF Power	± 1.0 dB
RF Power Density	± 2.2 dB
Radiated Spurious Emissions test	± 5.03 dB (30M~1000MHz)
	± 5.47 dB (1000M~25000MHz)
Conducted Spurious Emissions test	± 3.64 dB (AC mains 150KHz~30MHz)

6.4 Test Equipment Calibration

All the test equipments used are valid and calibrated by CEPREI Certification Body that address is No.110 Dongguan Zhuang RD. Guangzhou, P.R.China.

7 Test Summary

Test Items	Test Requirement	Result
Conducted Emissions	15.207(a)	N/A
Radiated Emissions	15.407(a) 15.205(a) 15.209(a)	PASS
Duty Cycle	KDB 789033	--
6dB Bandwidth	15.407(a)	PASS
26 dB Emission Bandwidth & 99% Occupied Bandwidth	15.407(a)	PASS
Maximum Conducted Output Power	15.407(a)	PASS
Power Spectral Density	15.407(a)	PASS
Unwanted Emissions that fall Outside of the Restricted Bands	15.407(a)	PASS
Antenna Requirement	15.203	PASS
Maximum Permissible Exposure (Exposure of Humans to RF Fields)	1.1307(b)(1)	PASS

8 Radiated Emissions

Test Requirement: FCC CFR47 Part 15 Section 15.209 & 15.407

Test Method: ANSI C63.10:2013

Test Result: PASS

Measurement Distance: 3m

Limit:

Frequency (MHz)	Field Strength		Field Strength Limit at 3m Measurement Distance	
	uV/m	Distance (m)	uV/m	dBuV/m
0.009 ~ 0.490	$2400/F(\text{kHz})$	300	$10000 * 2400/F(\text{kHz})$	$20\log^{(2400/F(\text{kHz}))} + 80$
0.490 ~ 1.705	$24000/F(\text{kHz})$	30	$100 * 24000/F(\text{kHz})$	$20\log^{(24000/F(\text{kHz}))} + 40$
1.705 ~ 30	30	30	$100 * 30$	$20\log^{(30)} + 40$
30 ~ 88	100	3	100	$20\log^{(100)}$
88 ~ 216	150	3	150	$20\log^{(150)}$
216 ~ 960	200	3	200	$20\log^{(200)}$
Above 960	500	3	500	$20\log^{(500)}$

8.1 EUT Operation

Operating Environment :

Temperature: 23.5 °C

Humidity: 52.1 % RH

Atmospheric Pressure: 101.2kPa

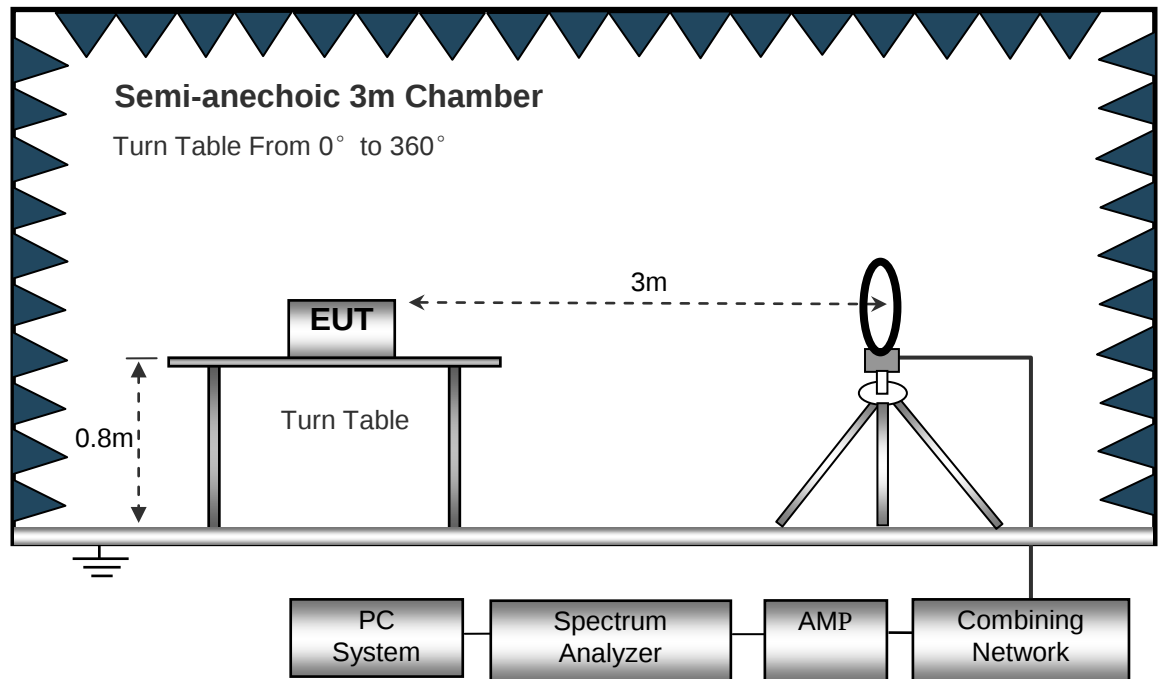
EUT Operation :

The test was performed in transmitting mode, the test data were shown in the report.

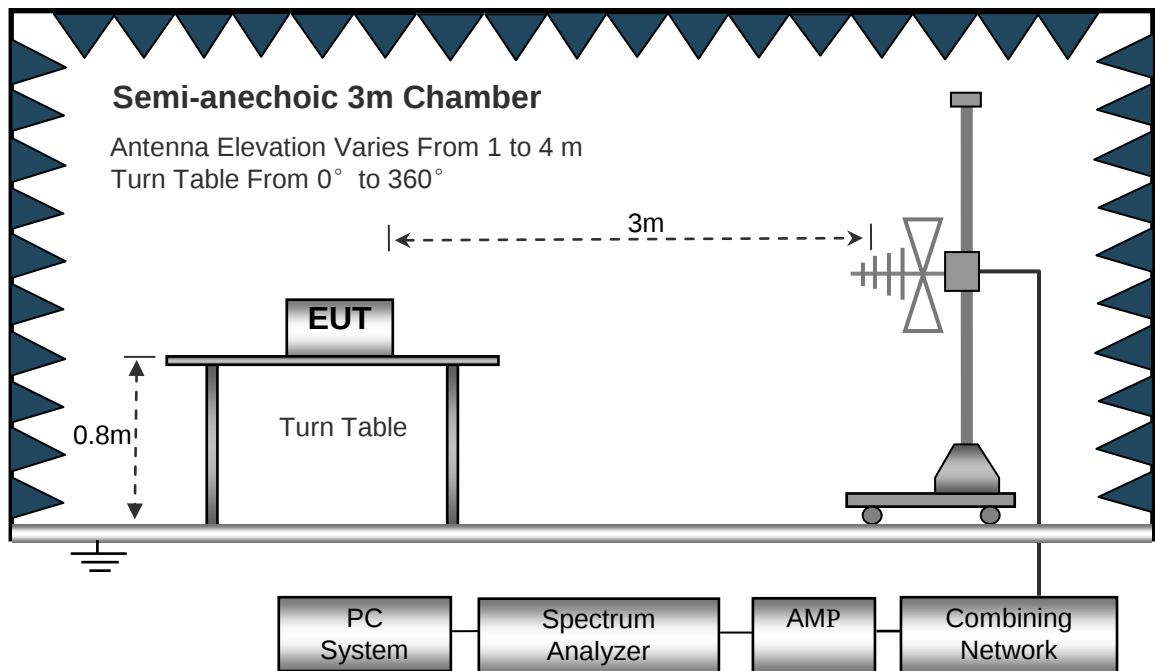
8.2 Test Setup

The radiated emission tests were performed in the 3m Semi- Anechoic Chamber test site, using the setup accordance with the ANSI C63.10: 2013.

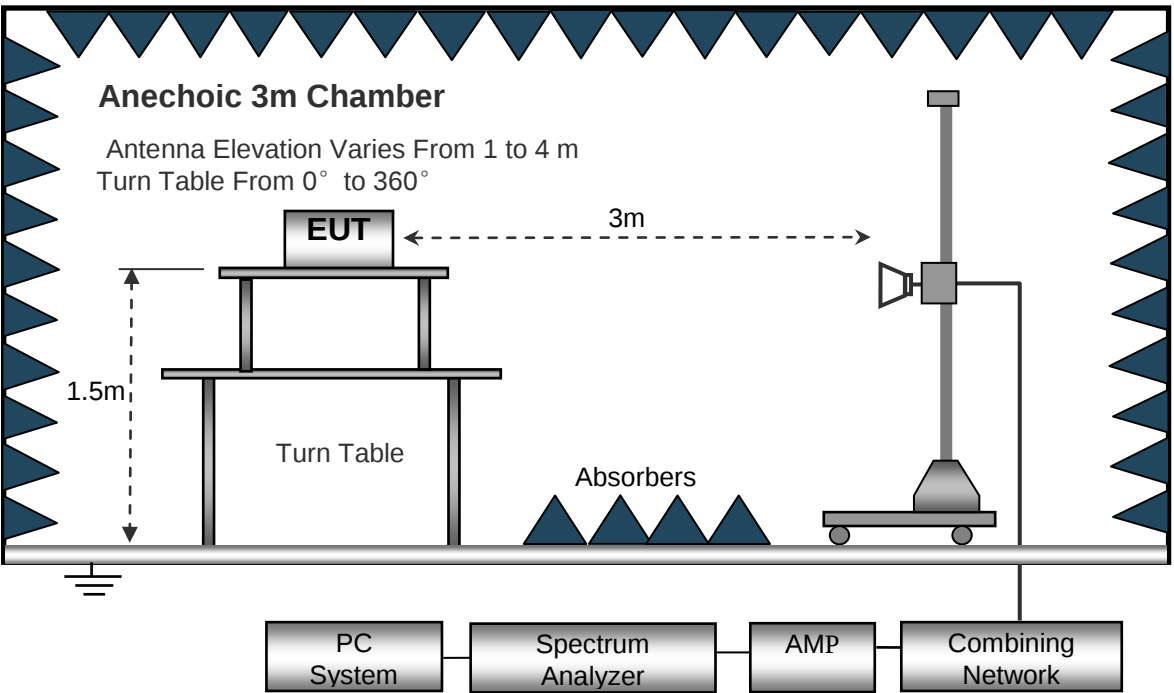
The test setup for emission measurement below 30MHz.



The test setup for emission measurement from 30 MHz to 1 GHz.



The test setup for emission measurement above 1 GHz.



8.3 Spectrum Analyzer Setup

Below 30MHz

Sweep Speed Auto
IF Bandwidth.....10kHz
Video Bandwidth.....10kHz
Resolution Bandwidth.....10kHz

30MHz ~ 1GHz

Sweep Speed Auto
Detector PK
Resolution Bandwidth.....100kHz
Video Bandwidth.....300kHz

Above 1GHz

Sweep Speed Auto
Detector PK
Resolution Bandwidth.....1MHz
Video Bandwidth.....3MHz
Detector Ave.
Resolution Bandwidth.....1MHz
Video Bandwidth.....10Hz

8.4 Test Procedure

1. The EUT is placed on a turntable, which is 0.8m above ground plane for below 1GHz and 1.5m for above 1GHz.
2. The turntable shall be rotated for 360 degrees to determine the position of maximum emission level.
3. EUT is set 3m away from the receiving antenna, which is moved from 1m to 4m to find out the maximum emissions.
4. Maximum procedure was performed on the six highest emissions to ensure EUT compliance.
5. And also, each emission was to be maximized by changing the polarization of receiving antenna both horizontal and vertical.
6. Repeat above procedures until the measurements for all frequencies are complete.
7. The radiation measurements are performed in X,Y and Z axis positioning(X denotes lying on the table, Y denotes side stand and Z denotes vertical stand),the worst condition was tested putting the eut in X axis,so the worst data were shown as follow.
8. A 2.4GHz high –pass filter is used during radiated emissions above 1GHz measurement.

8.5 Corrected Amplitude & Margin Calculation

The Corrected Amplitude is calculated by adding the Antenna Factor and Cable Factor, and subtracting the Amplifier Gain from the Amplitude reading. The basic equation is as follows:

$$\text{Corr. Ampl.} = \text{Indicated Reading} + \text{Antenna Factor} + \text{Cable Factor} - \text{Amplifier Gain}$$

The “Margin” column of the following data tables indicates the degree of compliance with the applicable limit. For example, a margin of -7dB means the emission is 7dB below the maximum limit for Class B. The equation for margin calculation is as follows:

$$\text{Margin} = \text{Corr. Ampl.} - \text{Limit}$$

8.6 Summary of Test Results

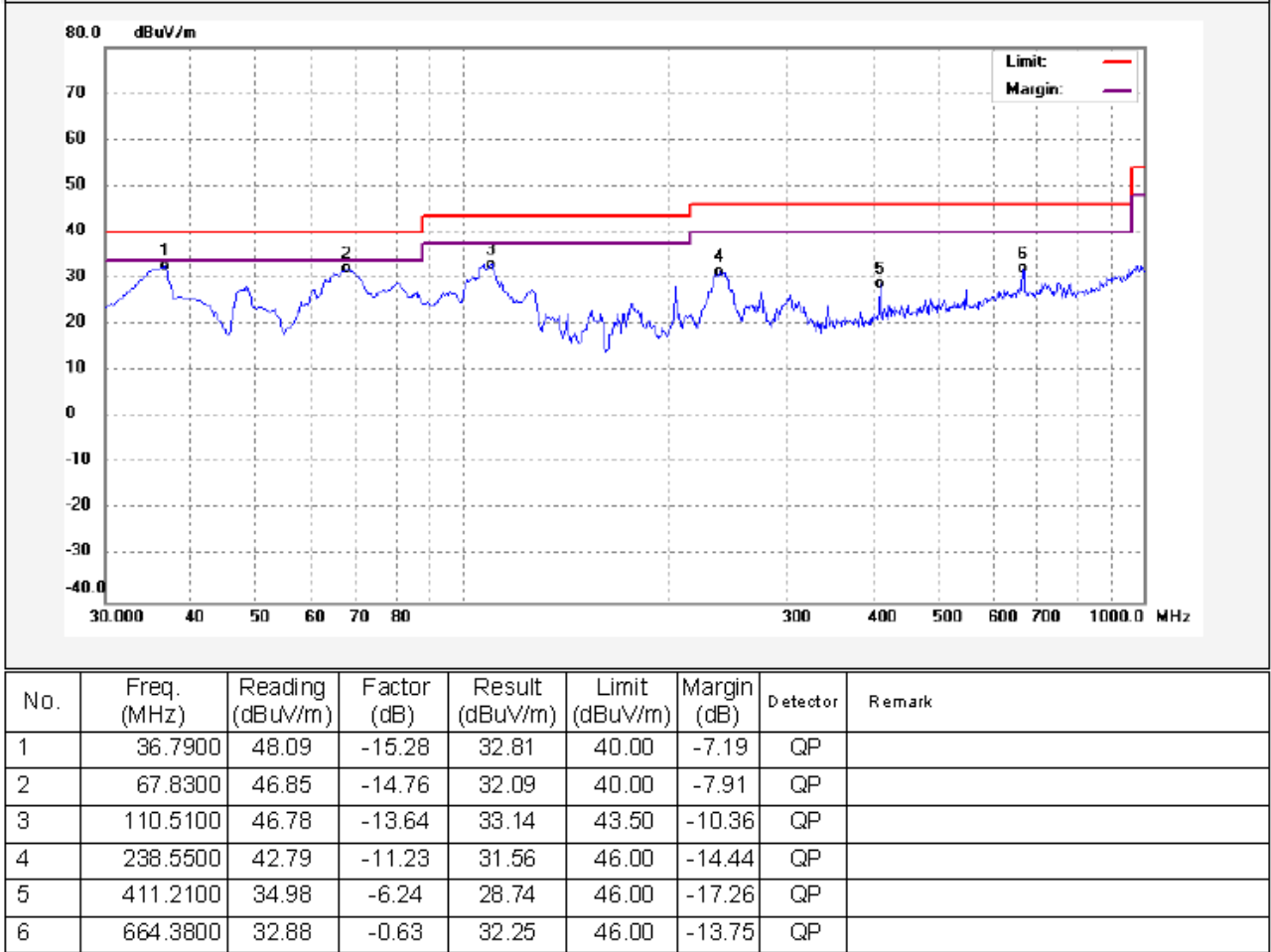
Remark: Both antenna 0 and antenna 1 are tested, The report shows only the worst data, U-NII-1 and antenna 0 is put in the report

Test Frequency: 9KHz~30MHz

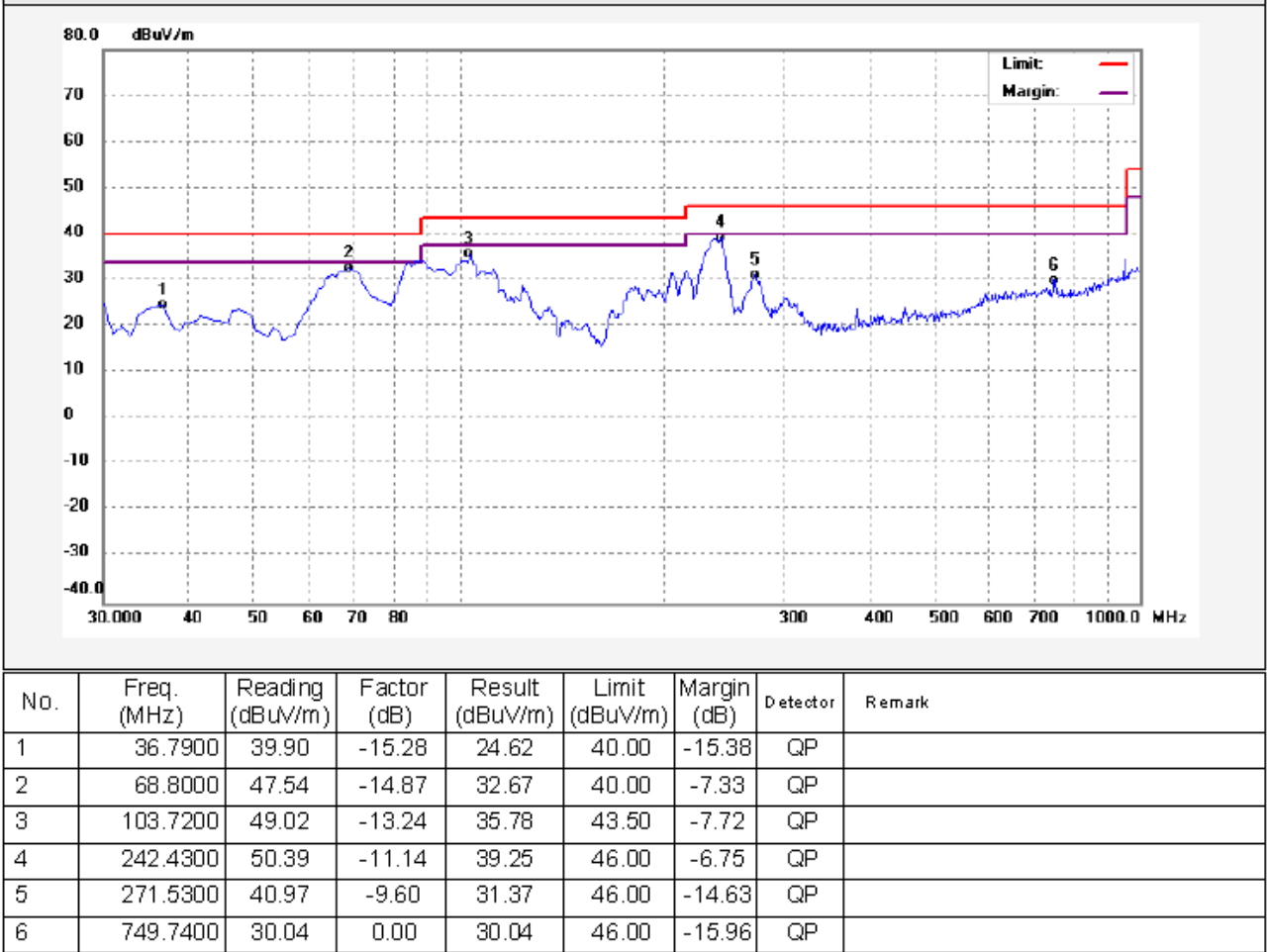
The measurements were more than 20 dB below the limit and not reported.

Test Frequency : 30MHz ~ 1GHz (only the worst-case plots for each mode)

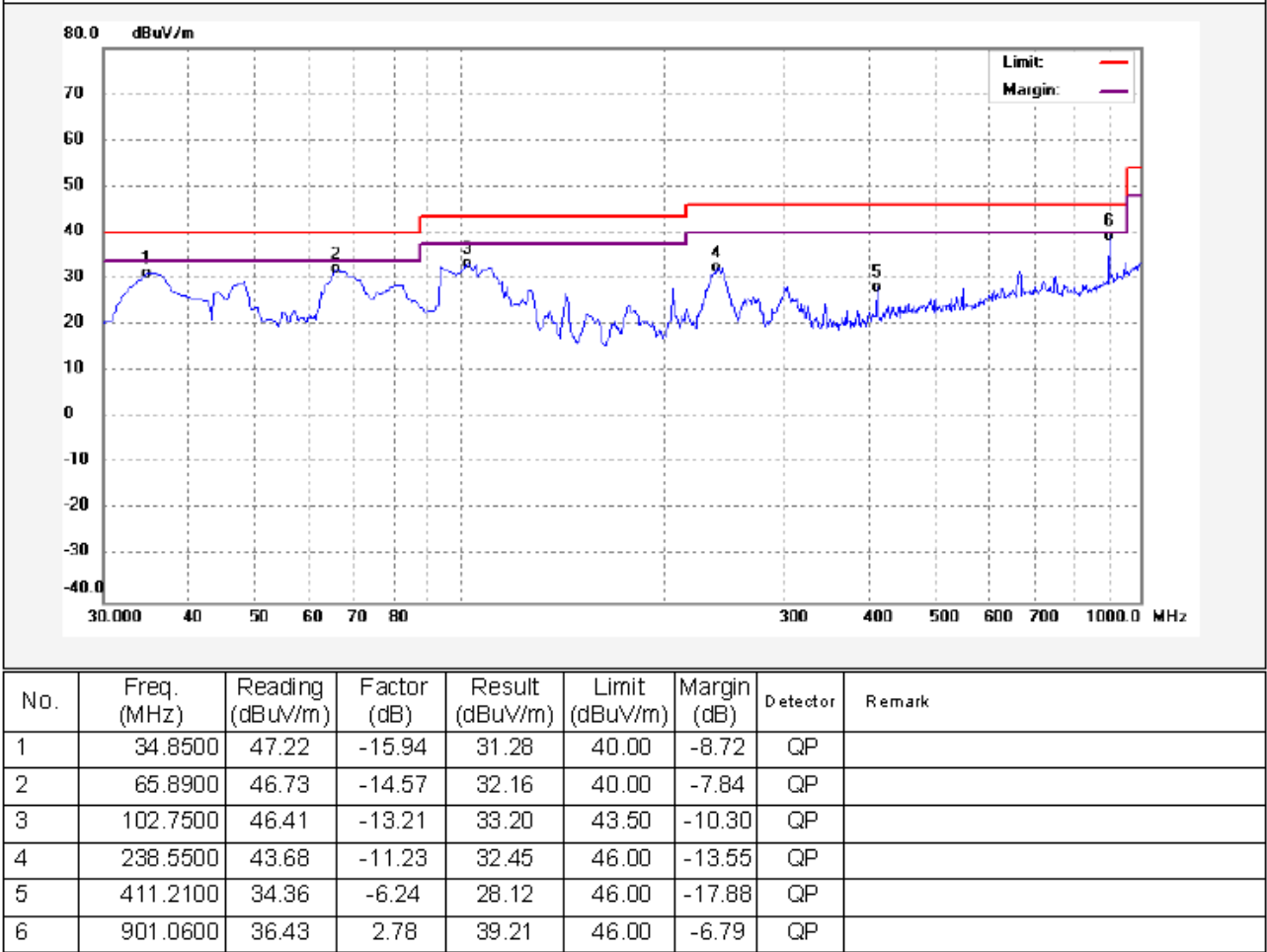
802.11a: Low Channel 5180MHz (Vertical)



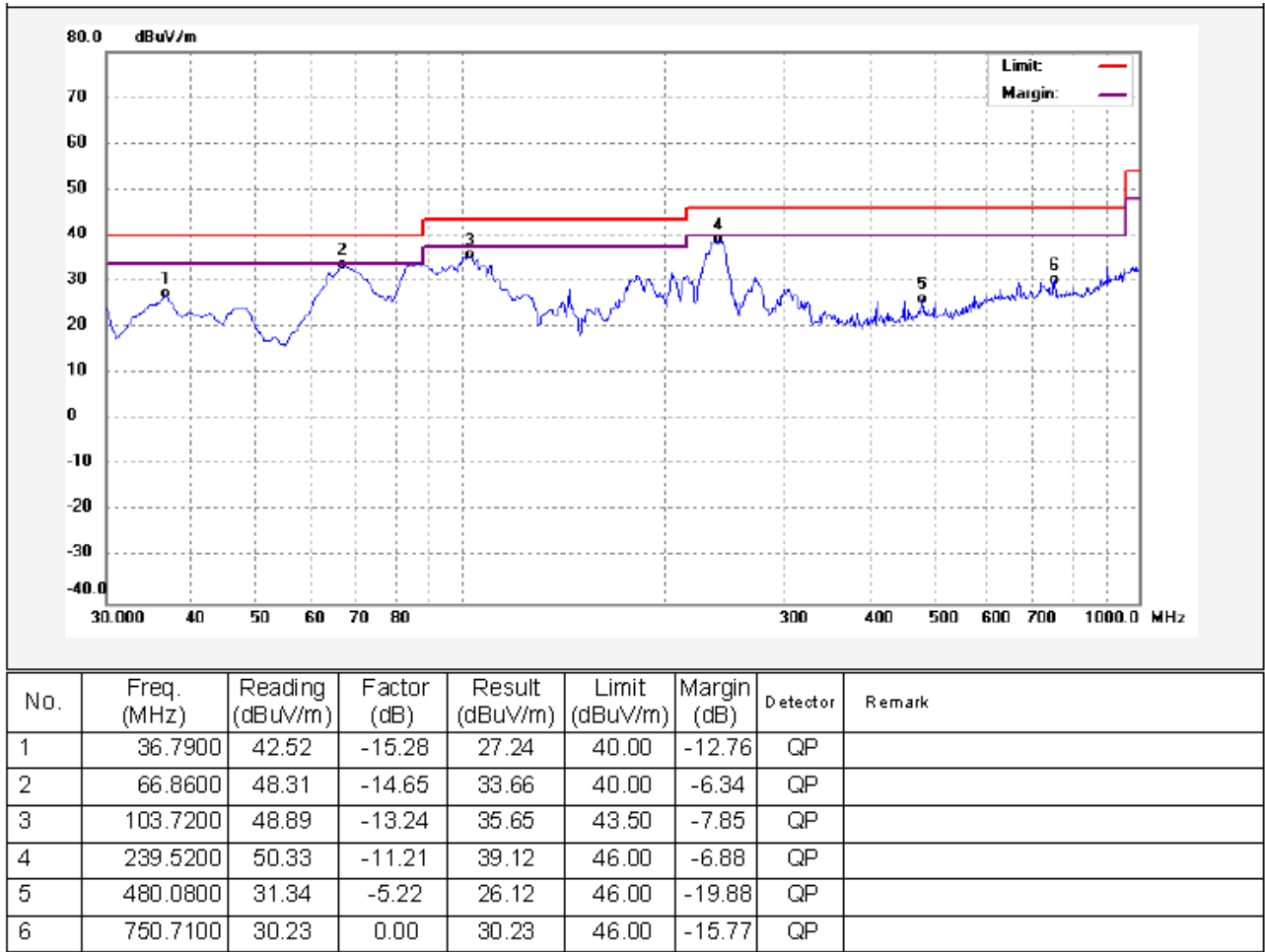
802.11a: Low Channel 5180MHz (Horizontal)



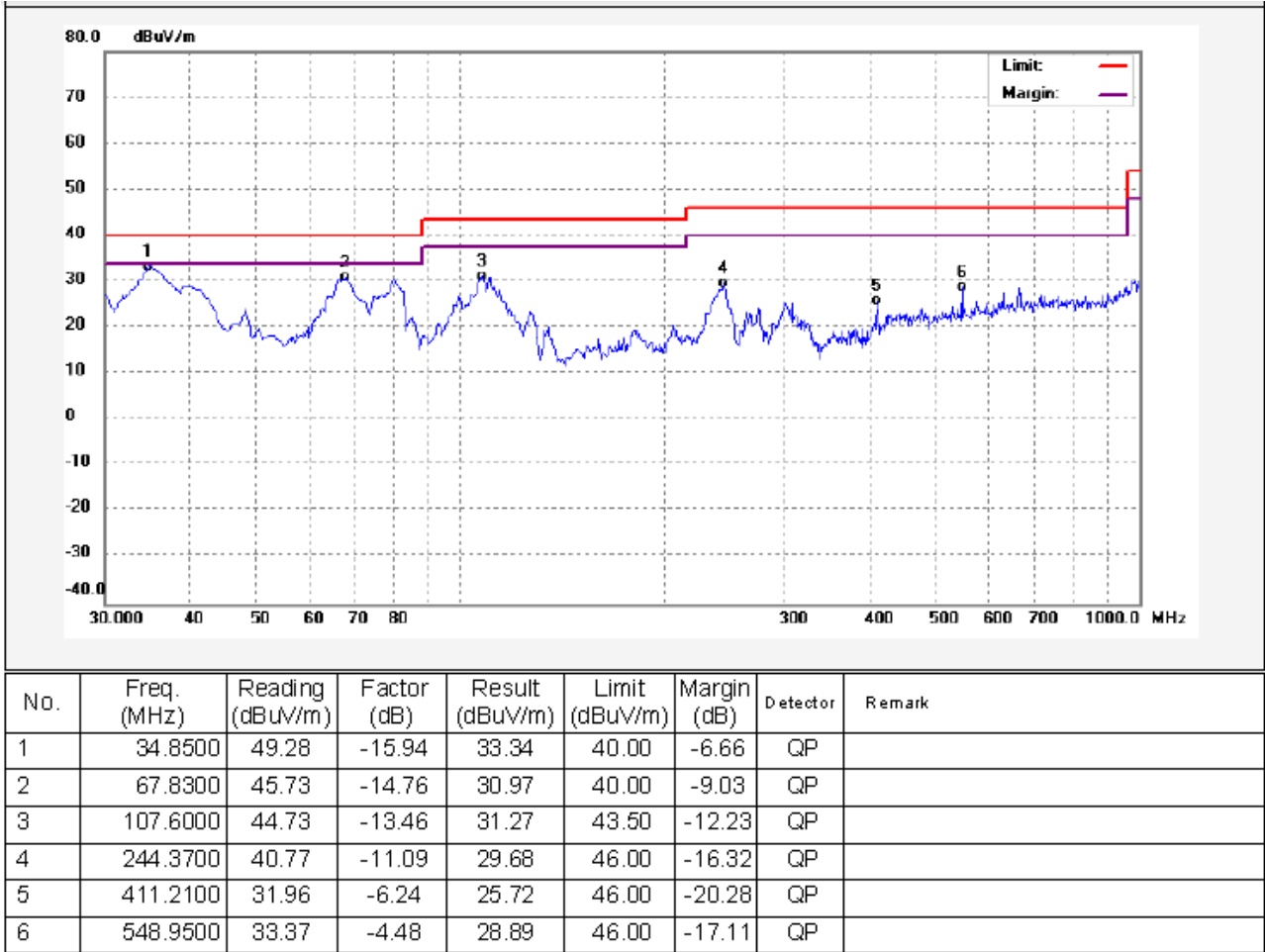
802.11n: Low Channel 5190MHz (Vertical)



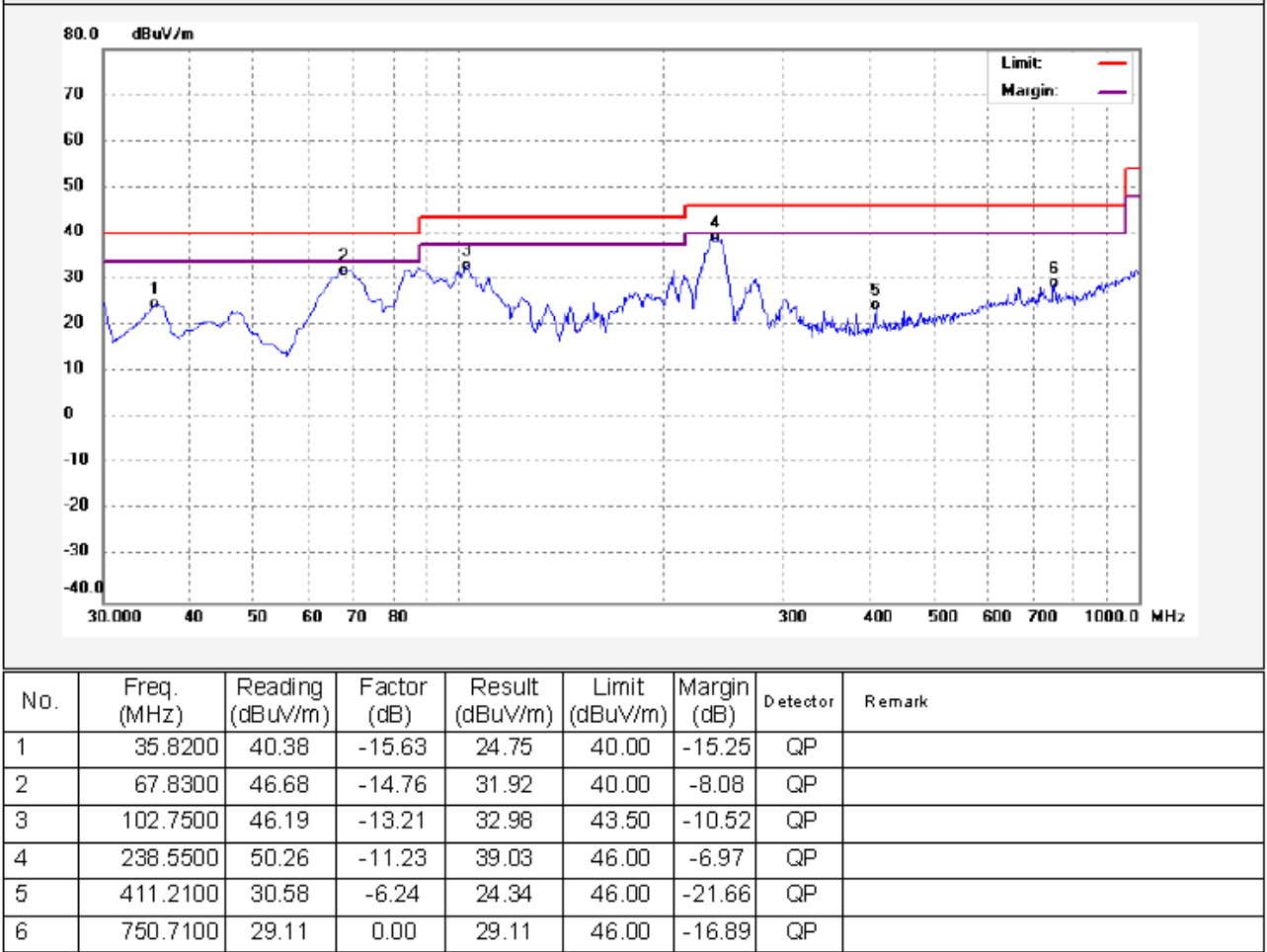
802.11n: Low Channel 5190MHz (Horizontal)



802.11ac: Low Channel 5210MHz (Vertical)



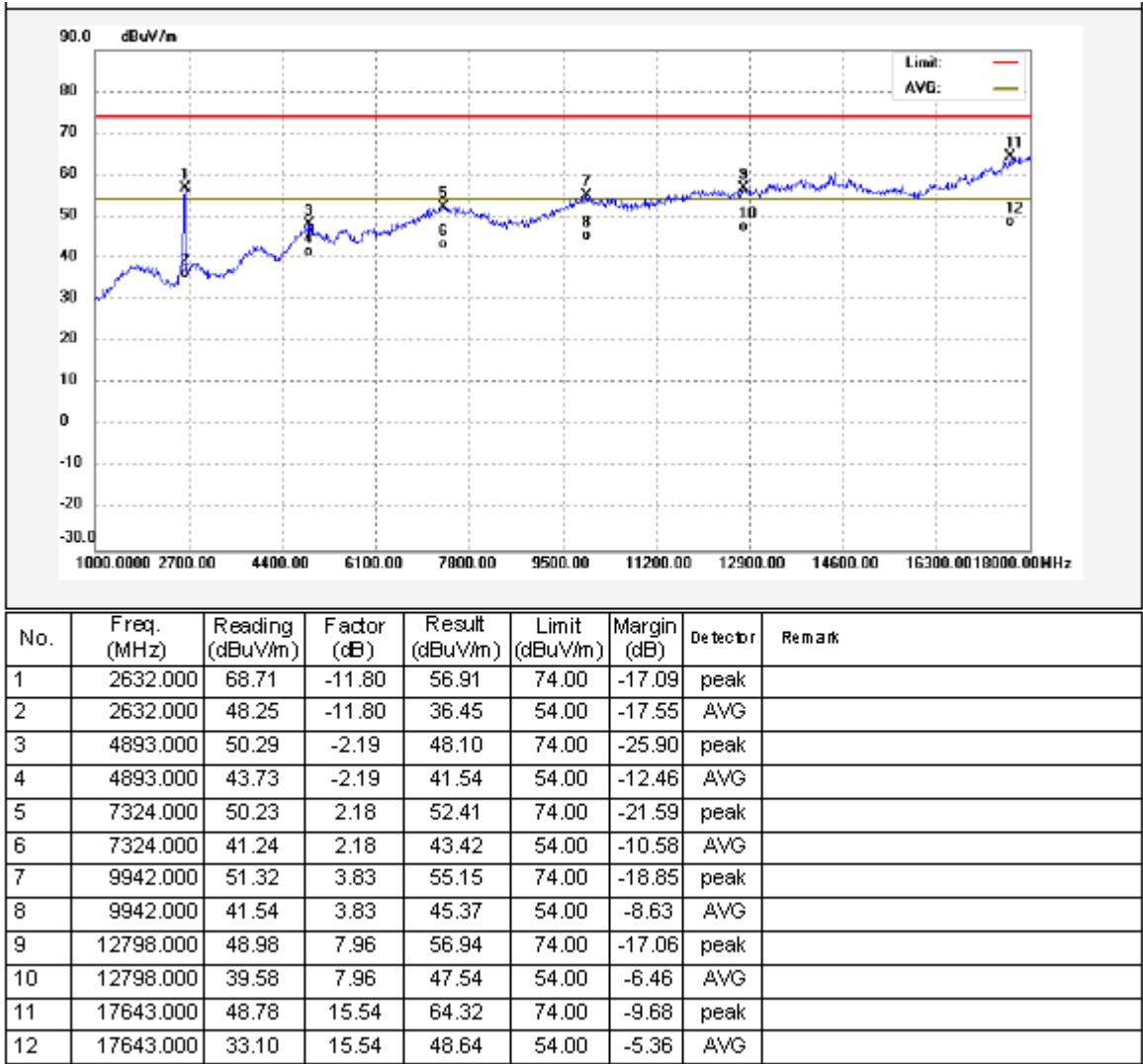
802.11ac: Low Channel 5210MHz (Horizontal)



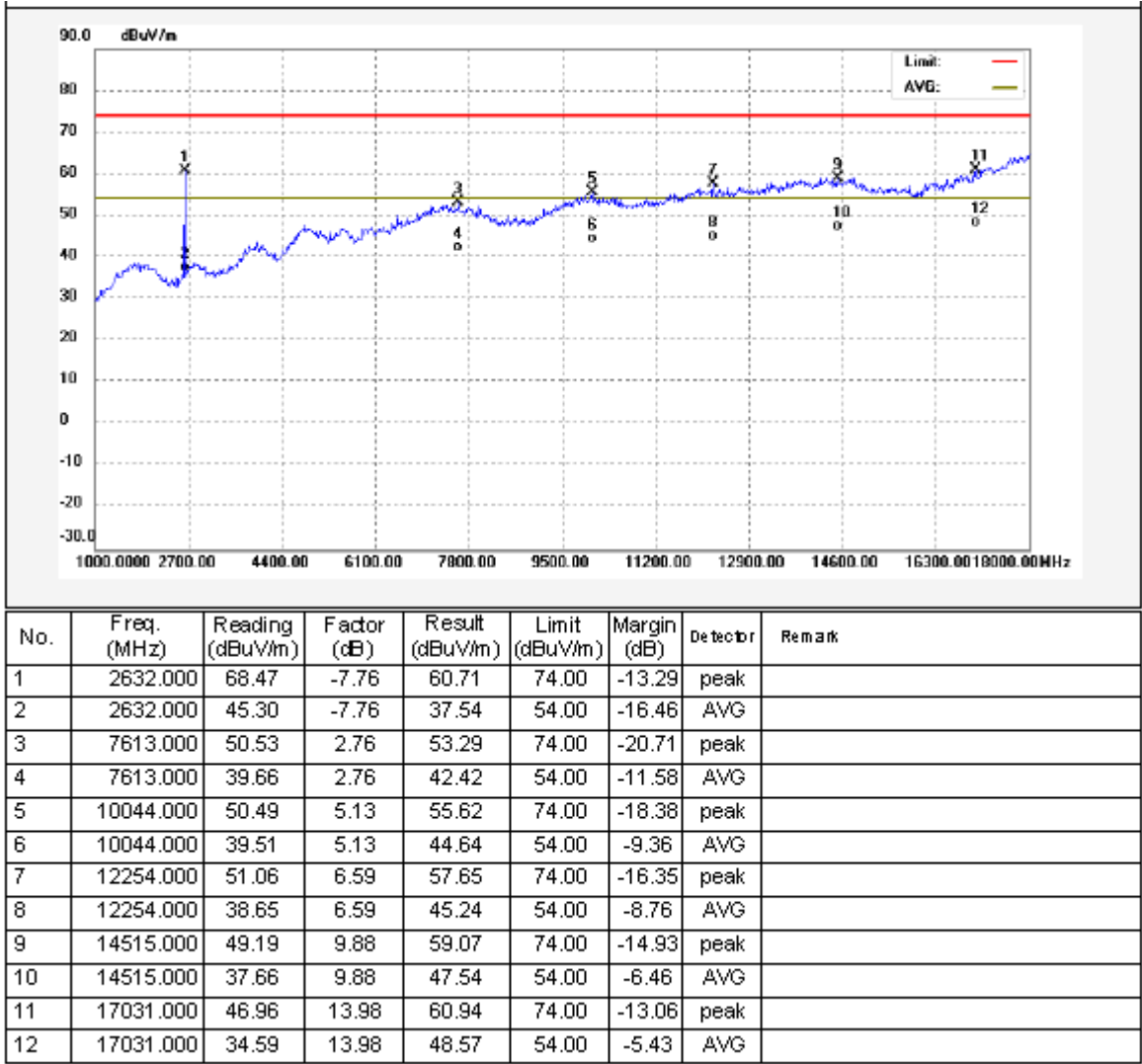
Test Frequency : 1GHz ~ 18GHz

Remark: The current test plots doesn't have the fundamental signal, It's blocked by the filter

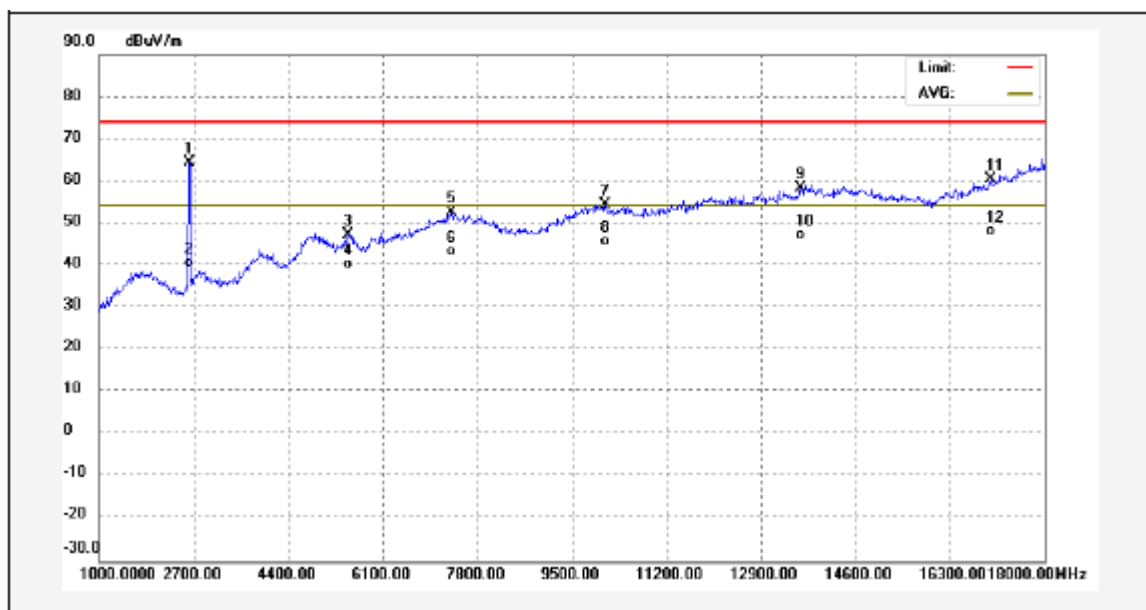
802.11a: Low Channel 5180MHz (Vertical)



802.11a: Low Channel 5180MHz (Horizontal)

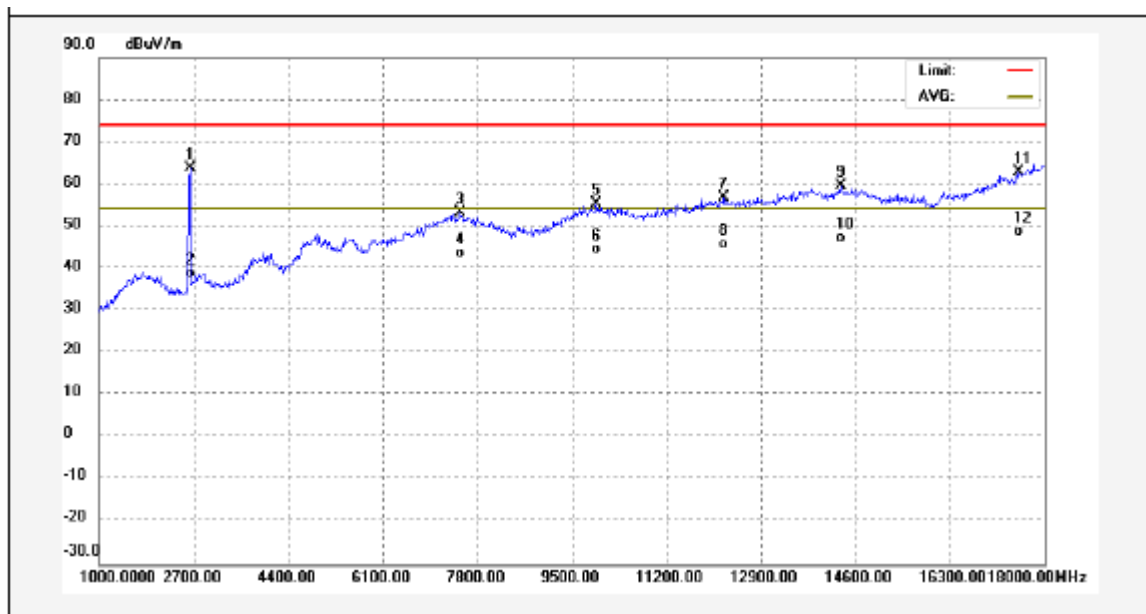


802.11n: Low Channel 5190MHz (Vertical)



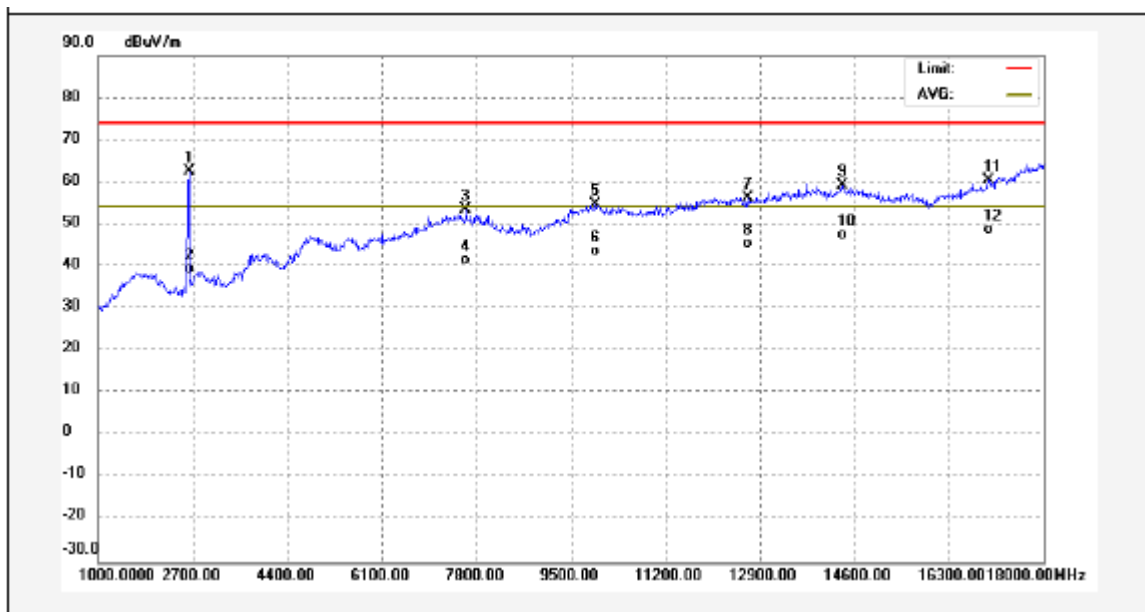
No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Remark
1	2615.000	76.16	-11.85	64.31	74.00	-9.69	peak	
2	2615.000	52.46	-11.85	40.61	54.00	-13.39	AVG	
3	5471.000	50.23	-3.05	47.18	74.00	-26.82	peak	
4	5471.000	43.39	-3.05	40.34	54.00	-13.66	AVG	
5	7324.000	50.62	2.18	52.80	74.00	-21.20	peak	
6	7324.000	41.07	2.18	43.25	54.00	-10.75	AVG	
7	10095.000	50.49	4.01	54.50	74.00	-19.50	peak	
8	10095.000	41.66	4.01	45.67	54.00	-8.33	AVG	
9	13614.000	48.96	9.50	58.46	74.00	-15.54	peak	
10	13614.000	37.81	9.50	47.31	54.00	-6.69	AVG	
11	17031.000	47.11	13.27	60.38	74.00	-13.62	peak	
12	17031.000	34.93	13.27	48.20	54.00	-5.80	AVG	

802.11n: Low Channel 5190MHz (Horizontal)

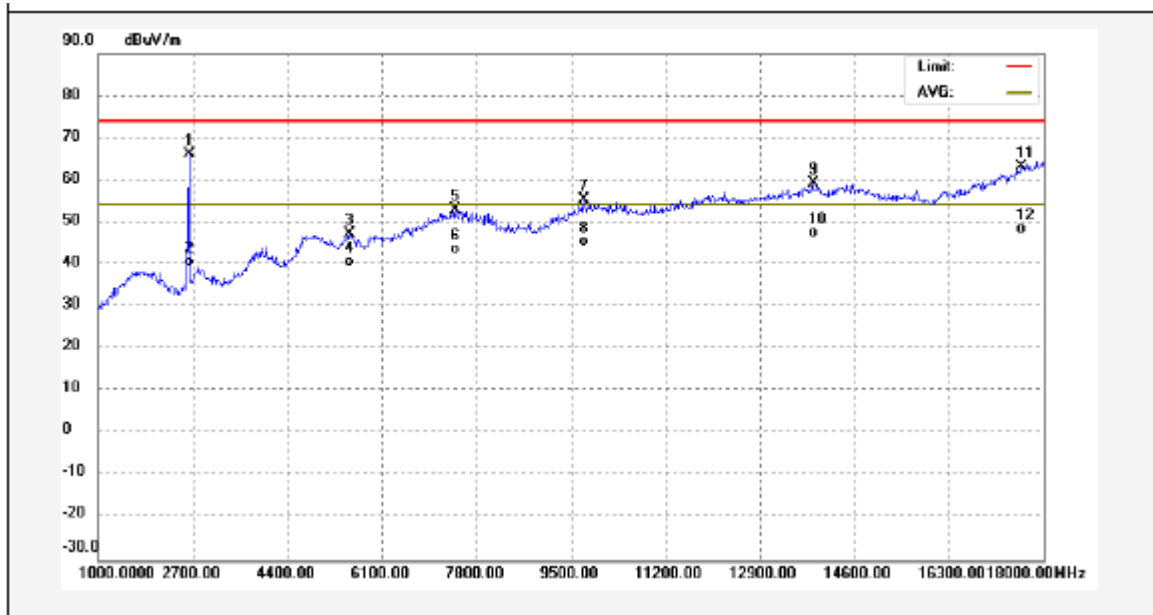


No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Remark
1	2632.000	71.53	-7.76	63.77	74.00	-10.23	peak	
2	2632.000	46.54	-7.76	38.78	54.00	-15.22	AVG	
3	7494.000	50.39	2.73	53.12	74.00	-20.88	peak	
4	7494.000	40.81	2.73	43.54	54.00	-10.46	AVG	
5	9942.000	50.27	4.98	55.25	74.00	-18.75	peak	
6	9942.000	39.69	4.98	44.67	54.00	-9.33	AVG	
7	12237.000	50.27	6.57	56.84	74.00	-17.16	peak	
8	12237.000	39.15	6.57	45.72	54.00	-8.28	AVG	
9	14328.000	49.34	10.26	59.60	74.00	-14.40	peak	
10	14328.000	36.89	10.26	47.15	54.00	-6.85	AVG	
11	17541.000	45.24	17.64	62.88	74.00	-11.12	peak	
12	17541.000	31.00	17.64	48.64	54.00	-5.36	AVG	

802.11ac: Low Channel 5210MHz (Vertical)



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Remark
1	2632.000	74.37	-11.80	62.57	74.00	-11.43	peak	
2	2632.000	51.19	-11.80	39.39	54.00	-14.61	AVG	
3	7613.000	51.40	2.01	53.41	74.00	-20.59	peak	
4	7613.000	39.66	2.01	41.67	54.00	-12.33	AVG	
5	9942.000	50.79	3.83	54.62	74.00	-19.38	peak	
6	9942.000	39.80	3.83	43.63	54.00	-10.37	AVG	
7	12679.000	48.76	7.60	56.36	74.00	-17.64	peak	
8	12679.000	37.97	7.60	45.57	54.00	-8.43	AVG	
9	14379.000	49.10	10.23	59.33	74.00	-14.67	peak	
10	14379.000	37.28	10.23	47.51	54.00	-6.49	AVG	
11	17014.000	47.11	13.20	60.31	74.00	-13.69	peak	
12	17014.000	35.67	13.20	48.87	54.00	-5.13	AVG	

802.11ac: Low Channel 5210MHz (Horizontal)**Test Frequency: 18GHz~40GHz**

The measurements were more than 20 dB below the limit and not reported.

9 Duty cycle

Test Requirement:	47 CFR Part 15C 15.407 KDB789033 D02 General U-NII Test Procedures New Rules v02r01, Section (B)
Test Method:	ANSI C63.10: 2013
Test Limit:	N/A
Test Result:	PASS
Remark:	Through Pre-scan, The duty cycle set for channel low, middle and high are same, and the duty cycle test is performed at channel low only, The report only records the test data of antenna 0

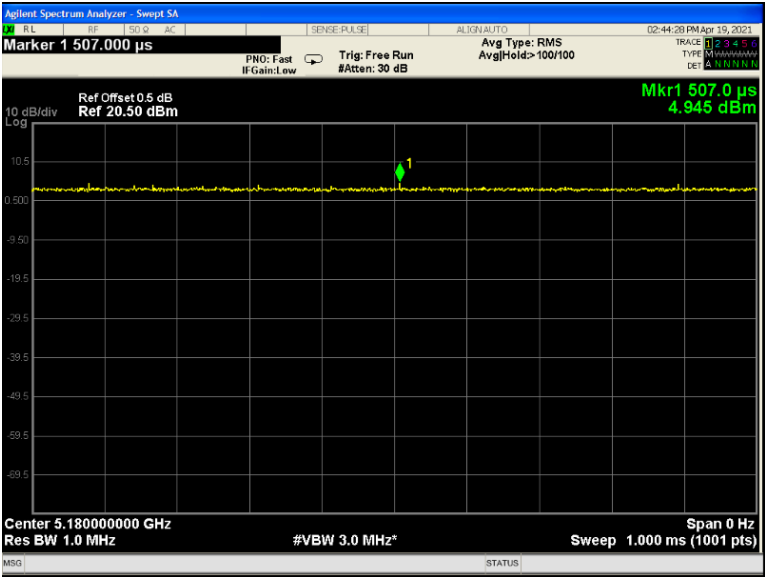
9.1 Summary of Test Results

802.11a(HT20) mode			
channel	On time(ms)	Period(ms)	Duty Cycle(%)
36	100	100	100
52	100	100	100
100	100	100	100
149	100	100	100
802.11n(HT20) mode			
channel	On time(ms)	Period(ms)	Duty Cycle(%)
36	100	100	100
52	100	100	100
100	100	100	100
149	100	100	100
802.11ac(HT20) mode			
channel	On time(ms)	Period(ms)	Duty Cycle(%)
36	100	100	100
52	100	100	100
100	100	100	100
149	100	100	100
802.11n(HT40) mode			
channel	On time(ms)	Period(ms)	Duty Cycle(%)
38	100	100	100
54	100	100	100
102	100	100	100
151	100	100	100
802.11ac(HT40) mode			
channel	On time(ms)	Period(ms)	Duty Cycle(%)
38	100	100	100
54	100	100	100
102	100	100	100
151	100	100	100

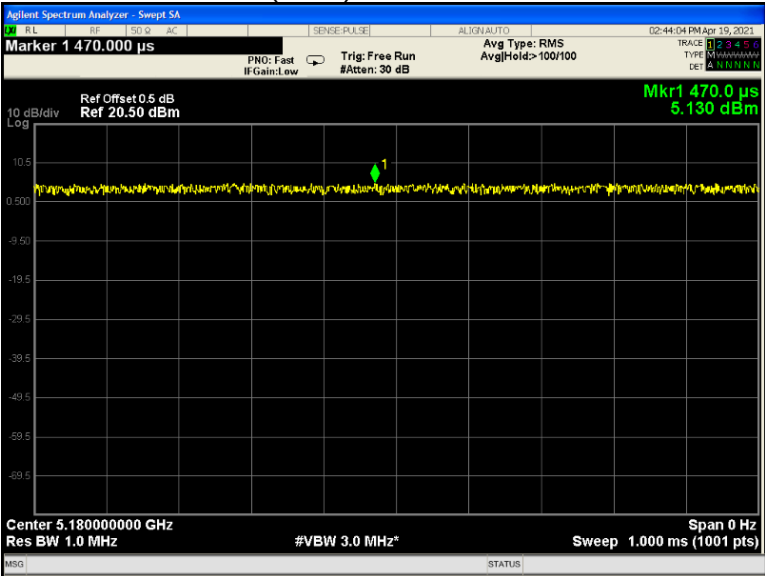
802.11ac(HT80) mode			
channel	On time(ms)	Period(ms)	Duty Cycle(%)
42	100	100	100
58	100	100	100
106	100	100	100
155	100	100	100

Test result plots shown as follows:

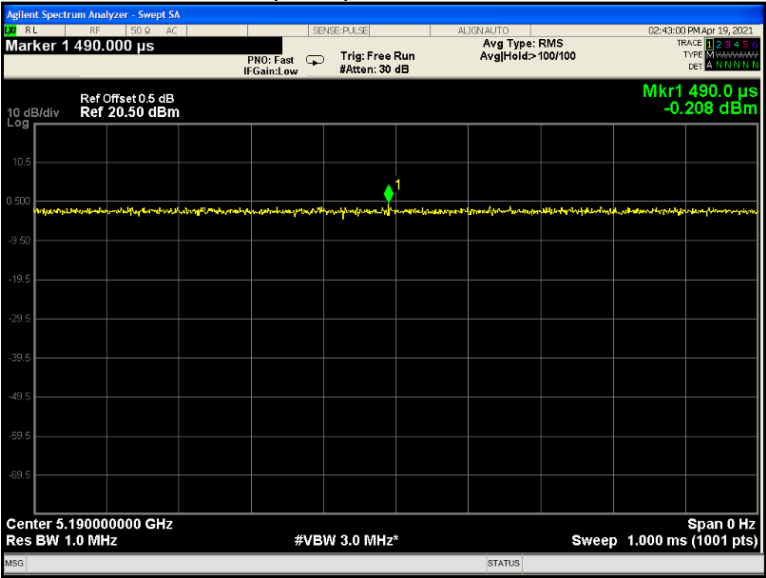
802.11a U-NII-1 Low channel



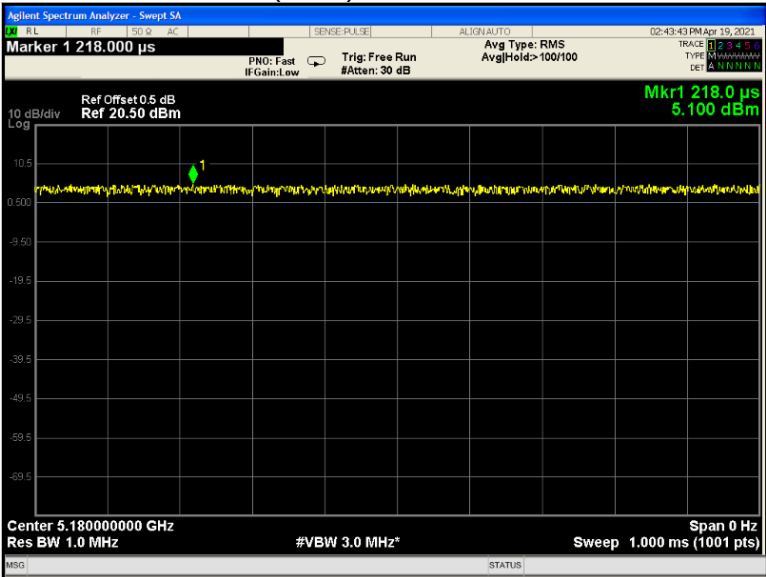
802.11n(HT20) U-NII-1 Low channel



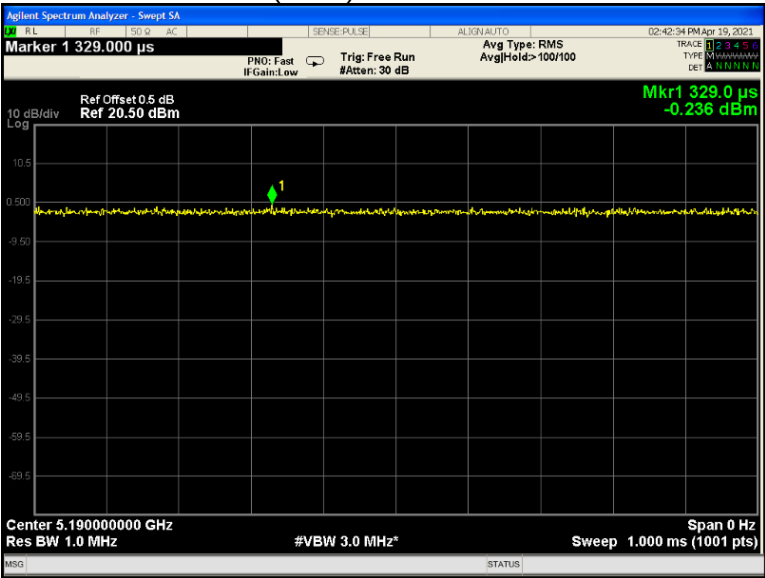
802.11n(HT40) U-NII-1 Low channel



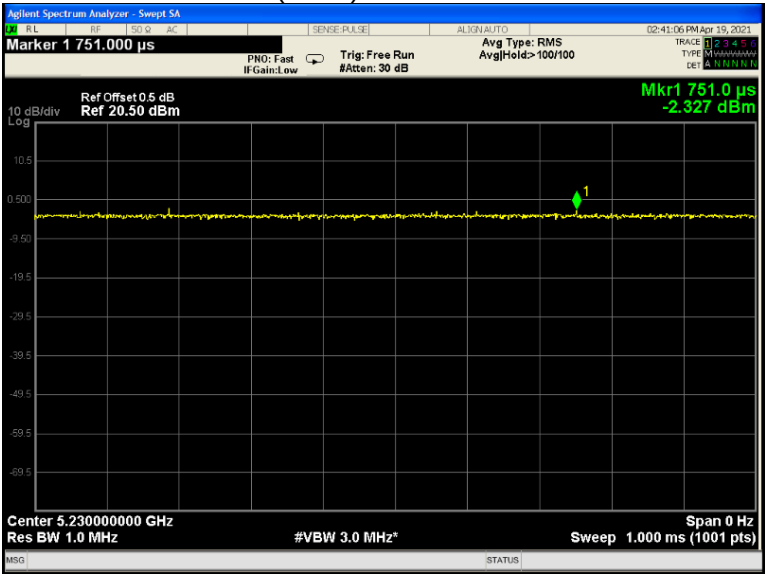
802.11ac(HT20) U-NII-1 Low channel



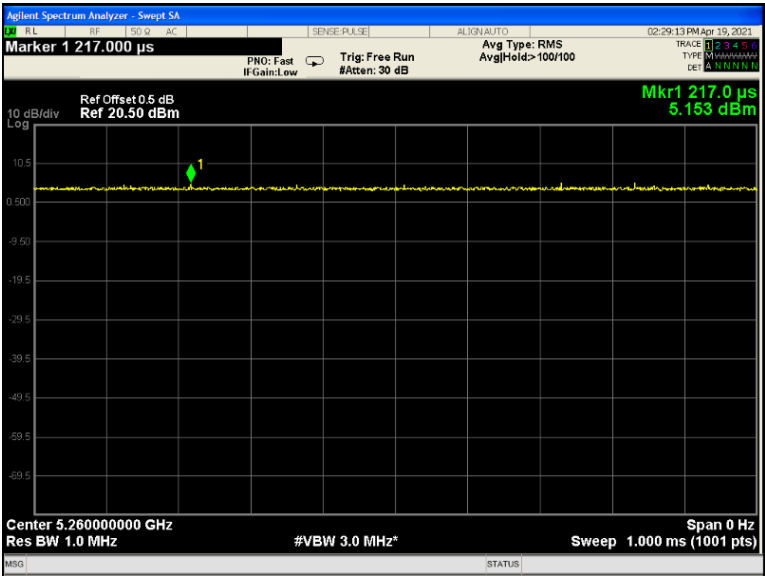
802.11ac(HT40) U-NII-1 Low channel



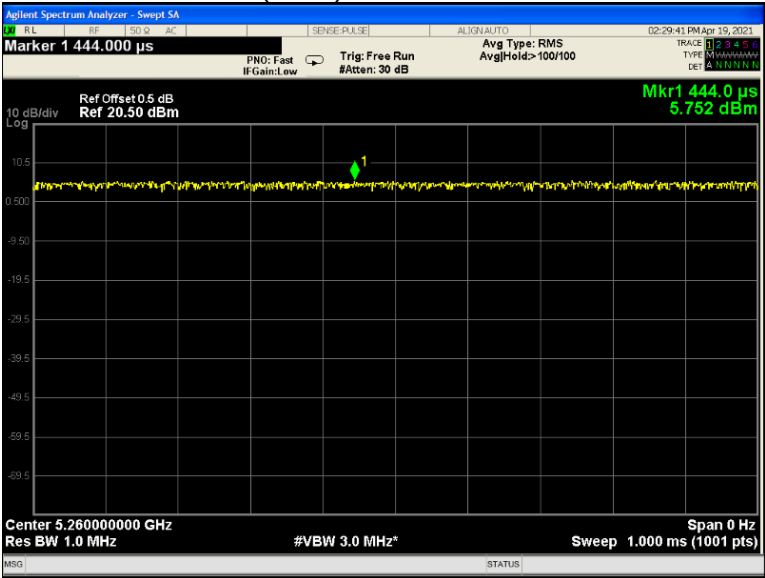
802.11ac(HT80) U-NII-1 Low channel



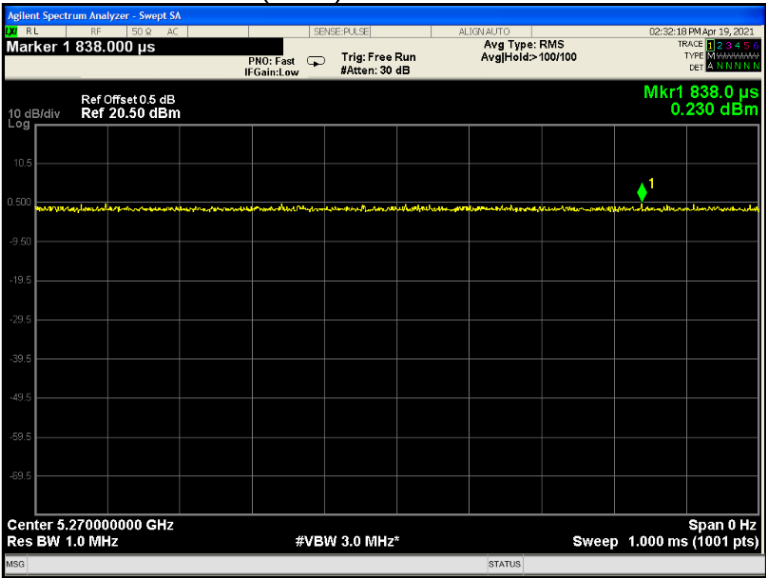
802.11a U-NII-2A Low channel



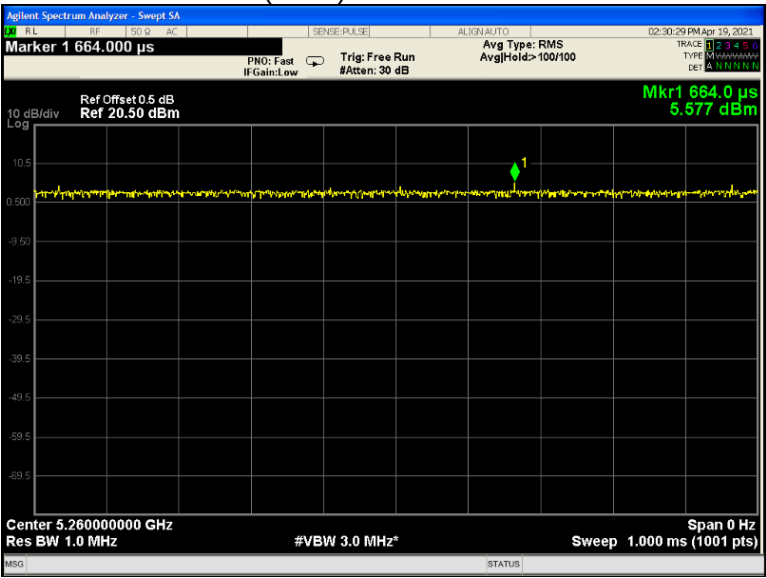
802.11n(HT20) U-NII-2A Low channel



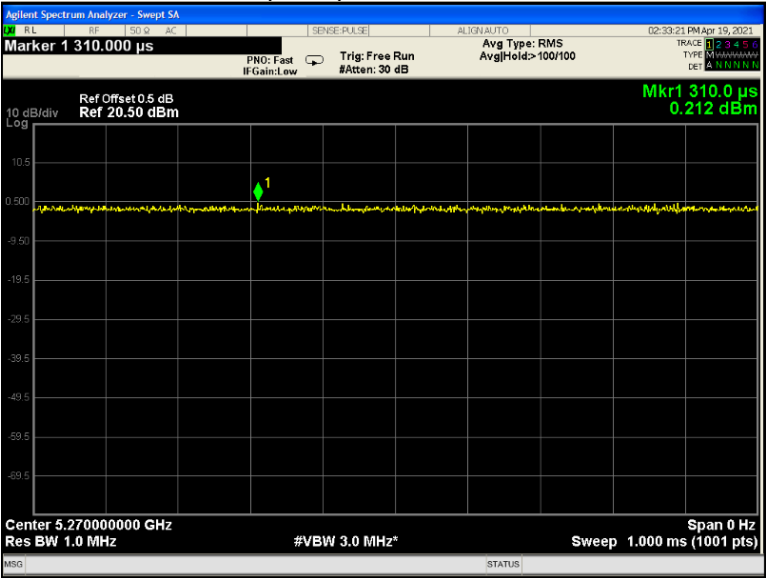
802.11n(HT40) U-NII-2A Low channel



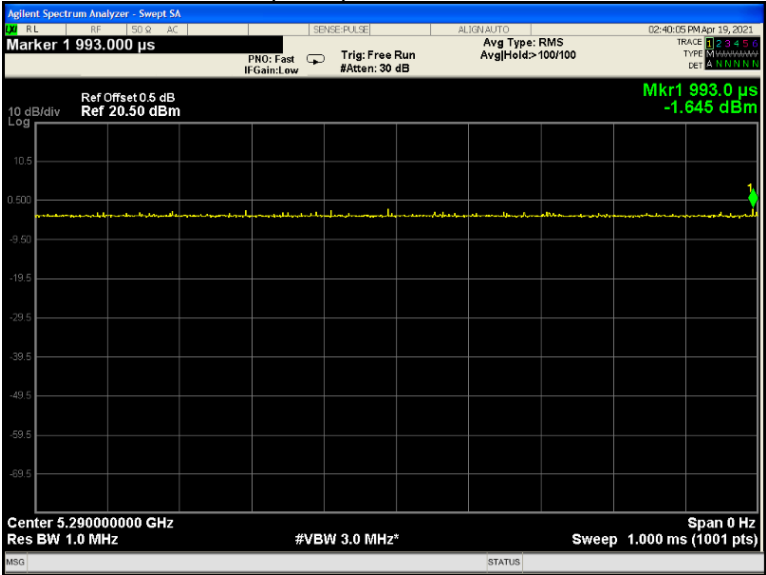
802.11ac(HT20) U-NII-2A Low channel



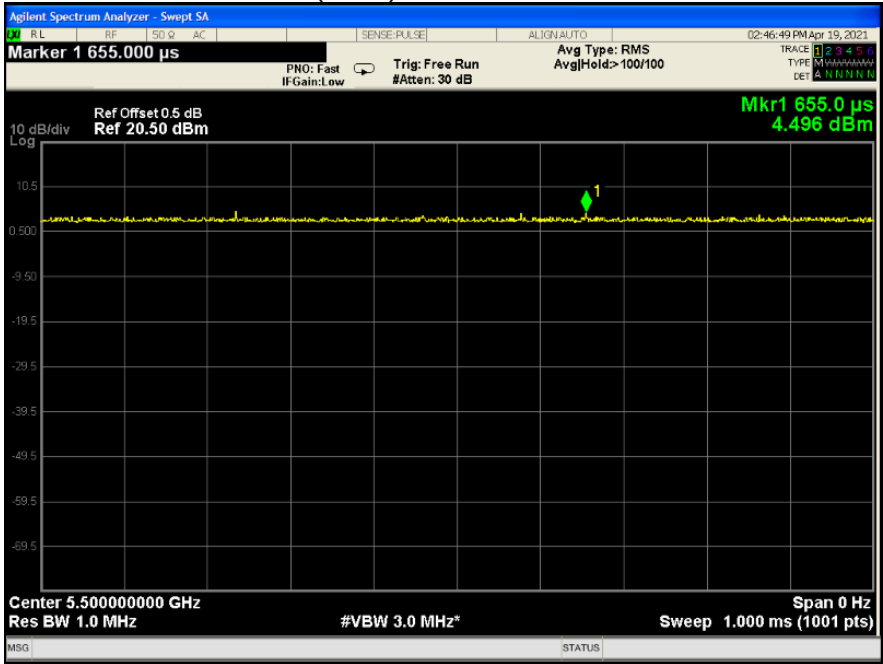
802.11ac(HT40) U-NII-2A Low channel



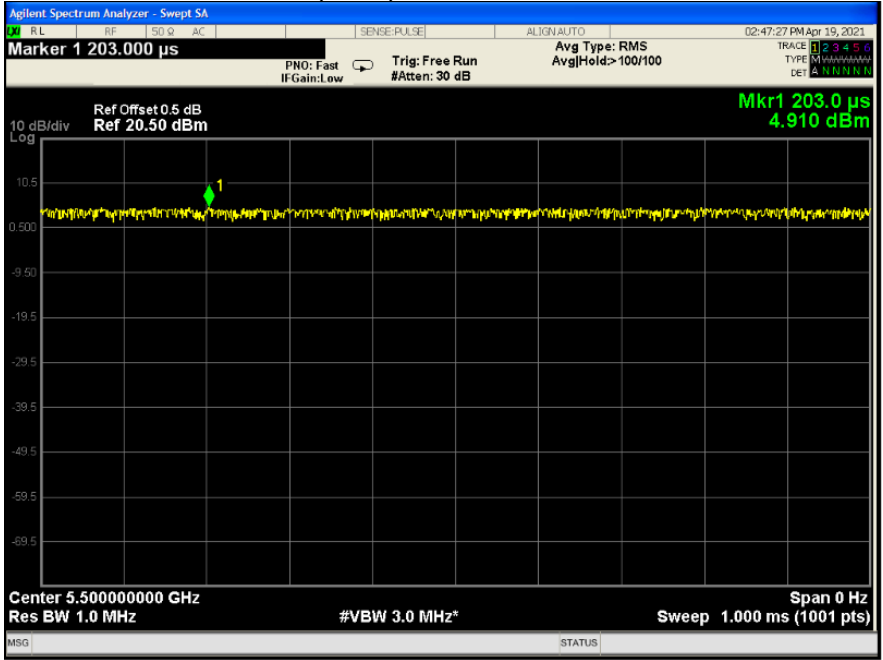
802.11ac(HT80) U-NII-2A Low channel



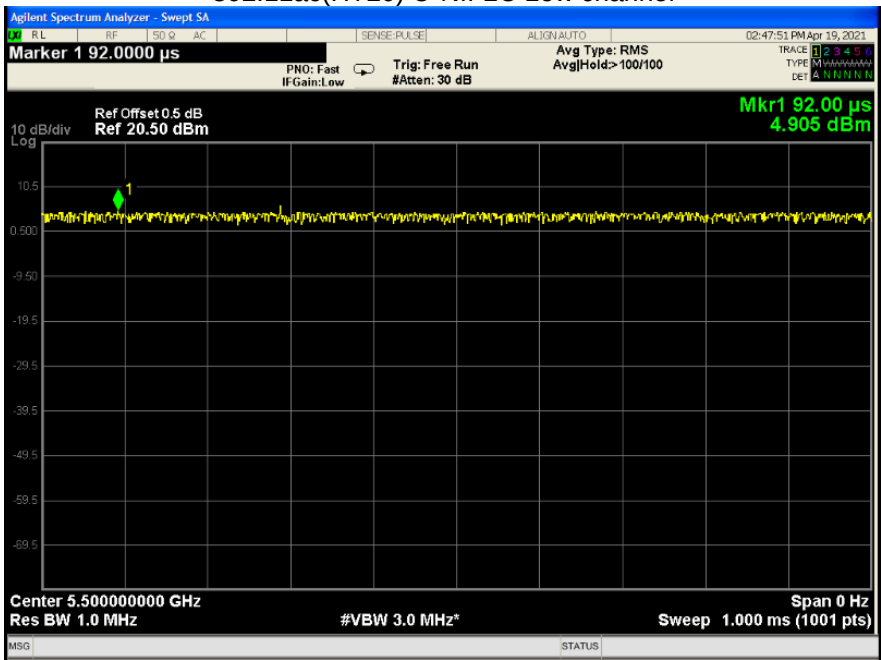
802.11a(HT20) U-NII-2C Low channel



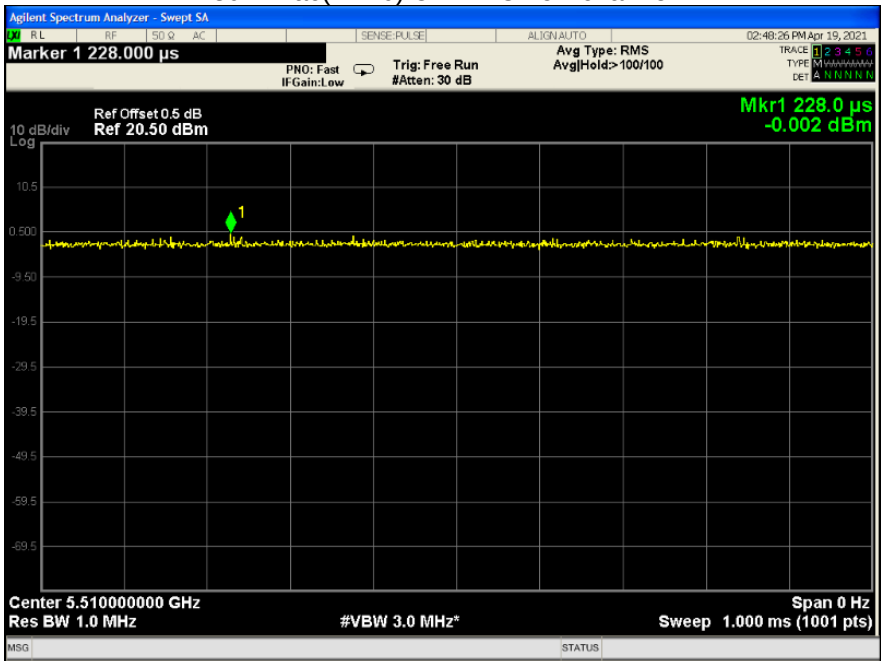
802.11n(HT20) U-NII-2C Low channel



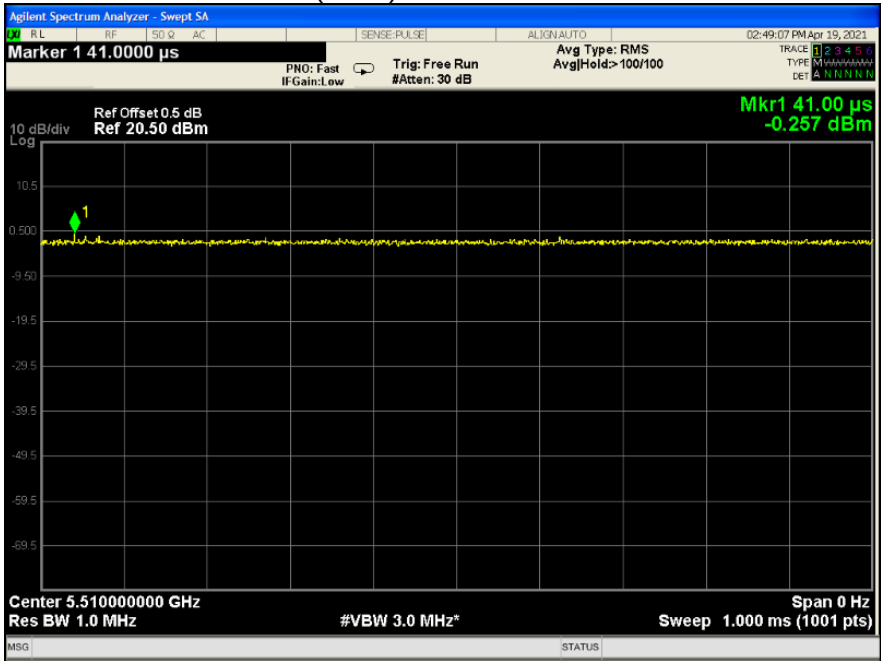
802.11ac(HT20) U-NII-2C Low channel



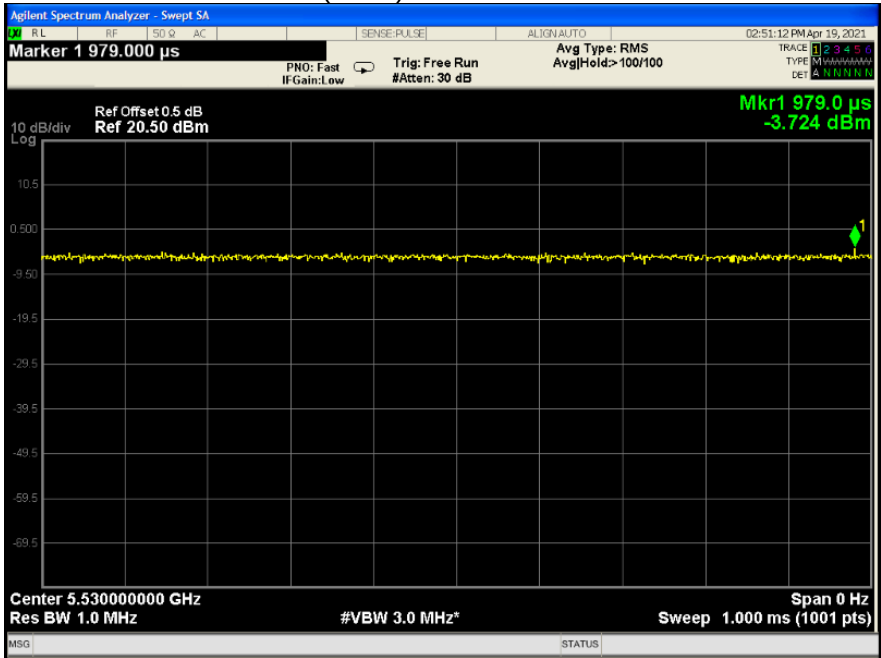
802.11ac(HT40) U-NII-2C Low channel



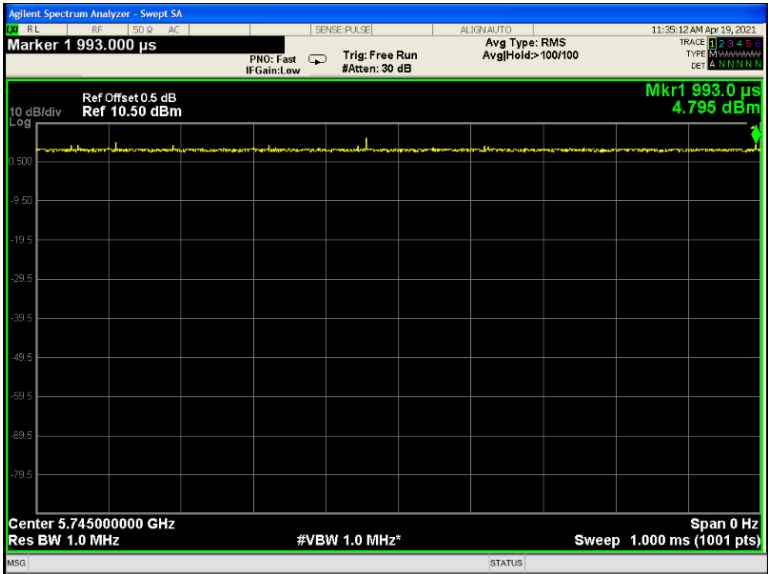
802.11n(HT40) U-NII-2C Low channel



802.11ac(HT80) U-NII-2C Low channel



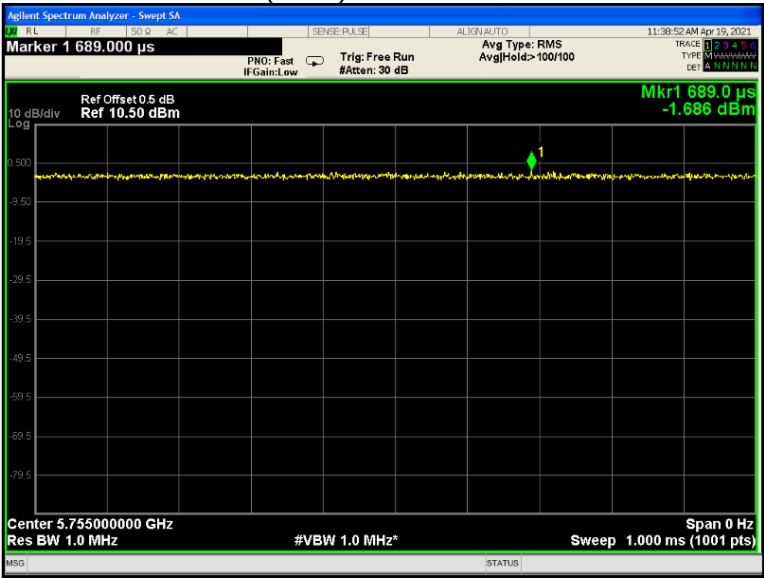
802.11a U-NII-3 Low channel



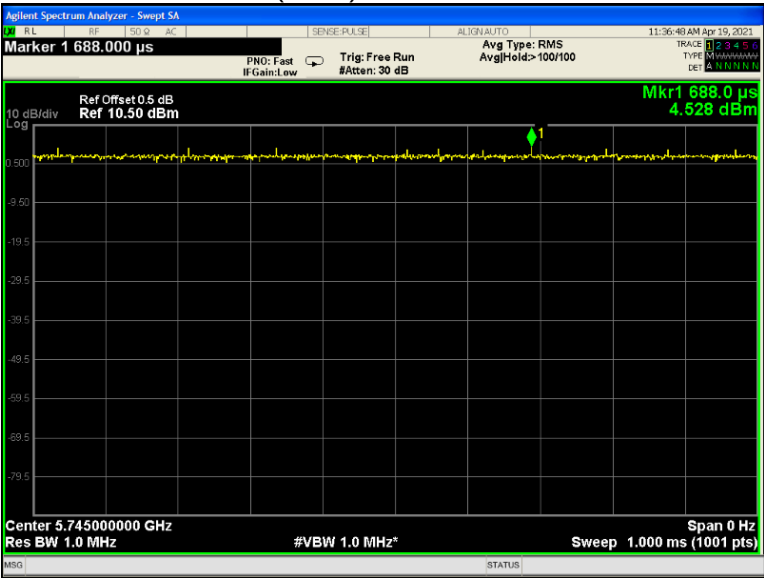
802.11n(HT20) U-NII-3 Low channel



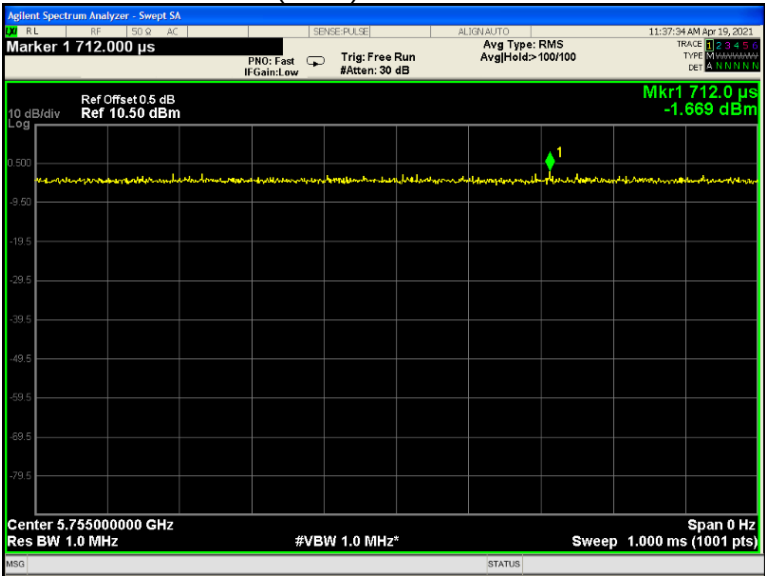
802.11n(HT40) U-NII-3 Low channel



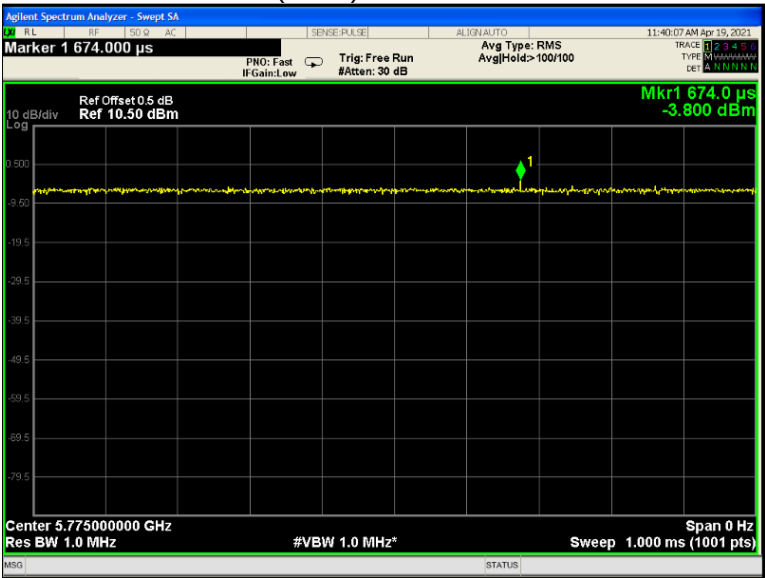
802.11ac(HT20) U-NII-3 Low channel



802.11ac(HT40) U-NII-3 Low channel



802.11ac(HT80) U-NII-3 Low channel



10 Band Edge

Test Requirement:	FCC CFR47 Part 15 Section 15.407
Test Method:	ANSI C63.10 2013
Test Limit:	(1) For transmitters operating in the 5.15-5.25 GHz band: All emissions outside of the 5.15-5.35 GHz band shall not exceed an e.i.r.p. of -27 dBm/MHz. (2) For transmitters operating in the 5.25-5.35 GHz band: All emissions outside of the 5.15-5.35 GHz band shall not exceed an e.i.r.p. of -27 dBm/MHz. (3) For transmitters operating in the 5.47-5.725 GHz band: All emissions outside of the 5.47-5.725 GHz band shall not exceed an e.i.r.p. of -27 dBm/MHz. (4) For transmitters operating in the 5.725-5.85 GHz band: (i) All emissions shall be limited to a level of -27 dBm/MHz at 75 MHz or more above or below the band edge increasing linearly to 10 dBm/MHz at 25 MHz above or below the band edge, and from 25 MHz above or below the band edge increasing linearly to a level of 15.6 dBm/MHz at 5 MHz above or below the band edge, and from 5 MHz above or below the band edge increasing linearly to a level of 27 dBm/MHz at the band edge. (ii) Devices certified before March 2, 2017 with antenna gain greater than 10 dBi may demonstrate compliance with the emission limits in §15.247(d), but manufacturing, marketing and importing of devices certified under this alternative must cease by March 2, 2018. Devices certified before March 2, 2018 with antenna gain of 10 dBi or less may demonstrate compliance with the emission limits in §15.247(d), but manufacturing, marketing and importing of devices certified under this alternative must cease before March 2, 2020.
Test Result:	PASS

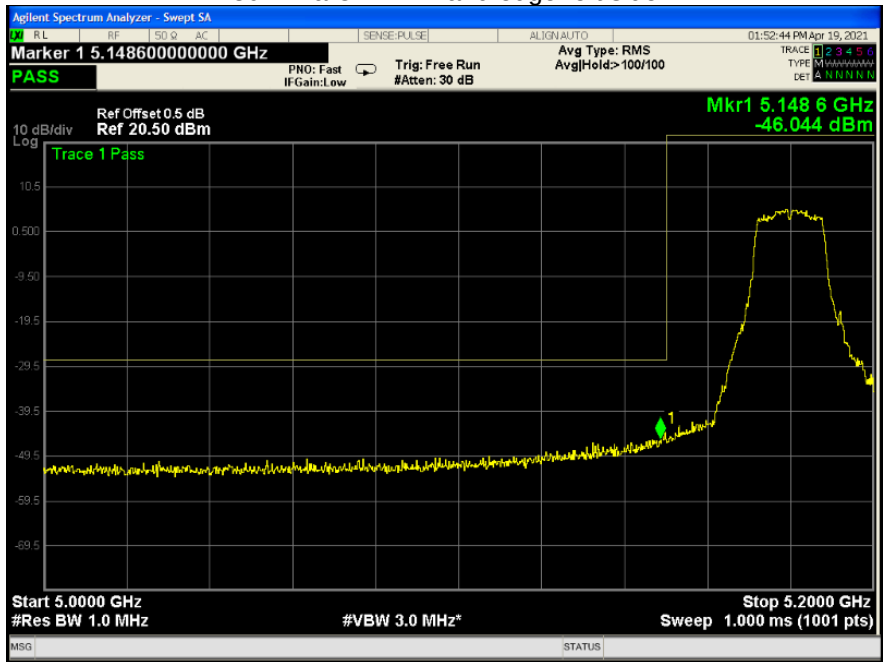
10.1 Test Produce

1. Check the calibration of the measuring instrument using either an internal calibrator or a known signal from an external generator.
2. Position the EUT without connection to measurement instrument. Turn on the EUT and connect its antenna terminal to measurement instrument via a low loss cable. Then set it to any one measured frequency within its operating range, and make sure the instrument is operated in its linear range.
3. Set RBW to 1000 kHz and VBW of spectrum analyzer to 3000 kHz with a convenient frequency span including 100 kHz bandwidth from band edge.
4. Measure the highest amplitude appearing on spectral display and set it as a reference level. Plot the graph with marking the highest point and edge frequency.
5. Repeat above procedures until all measured frequencies were complete.

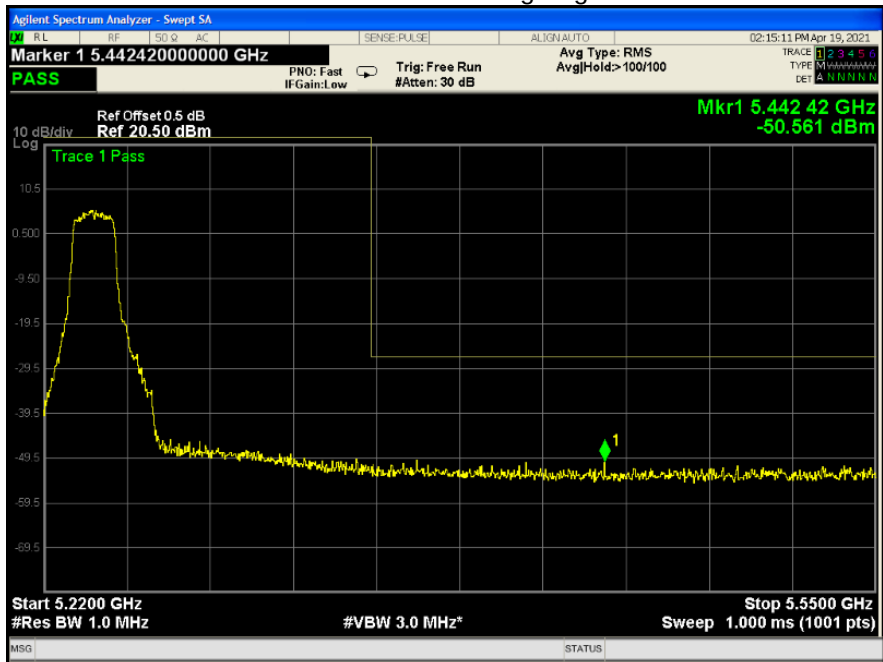
10.2 Test Result

Test result plots shown as follows: Antenna 0

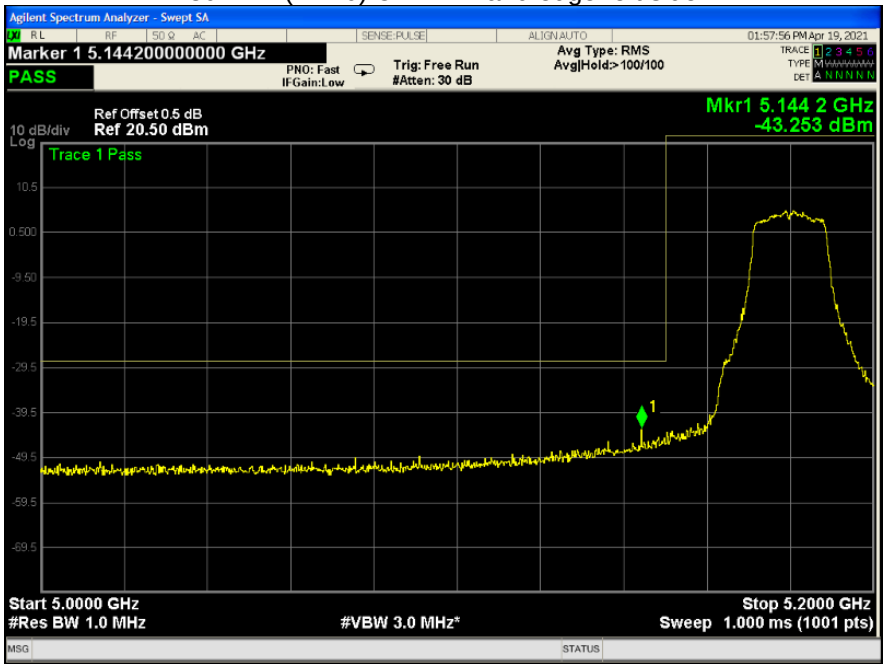
802.11a U-NII-1 Band edge-left side



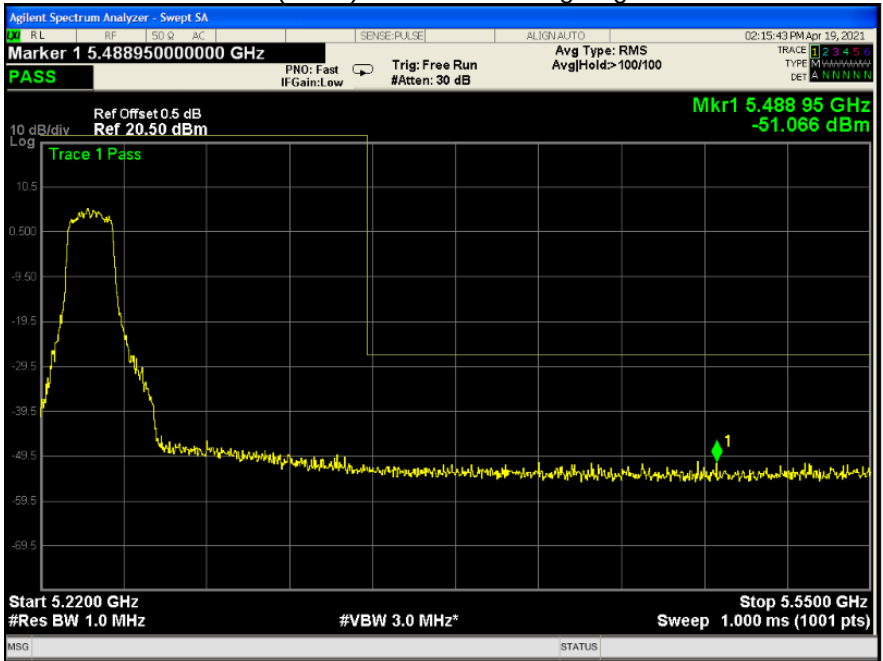
802.11a U-NII-1 Band edge-right side



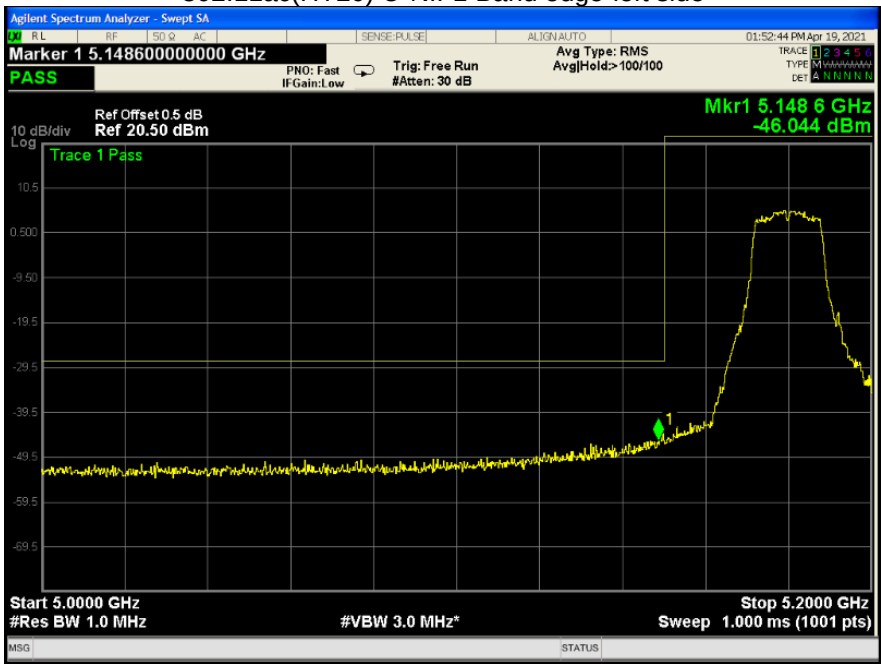
802.11n(HT20) U-NII-1 Band edge-left side



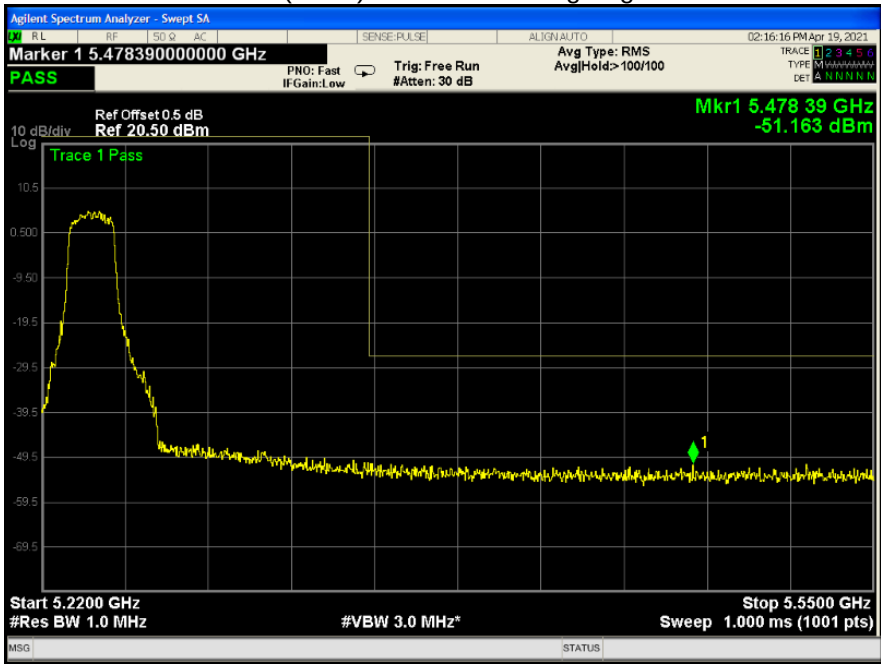
802.11n(HT20) U-NII-1 Band edge-right side



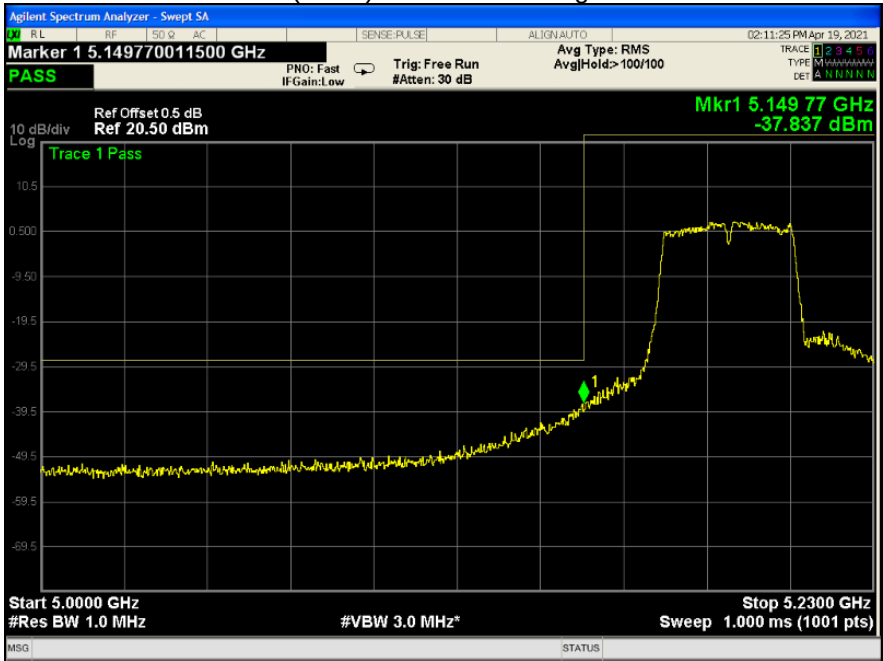
802.11ac(HT20) U-NII-1 Band edge-left side



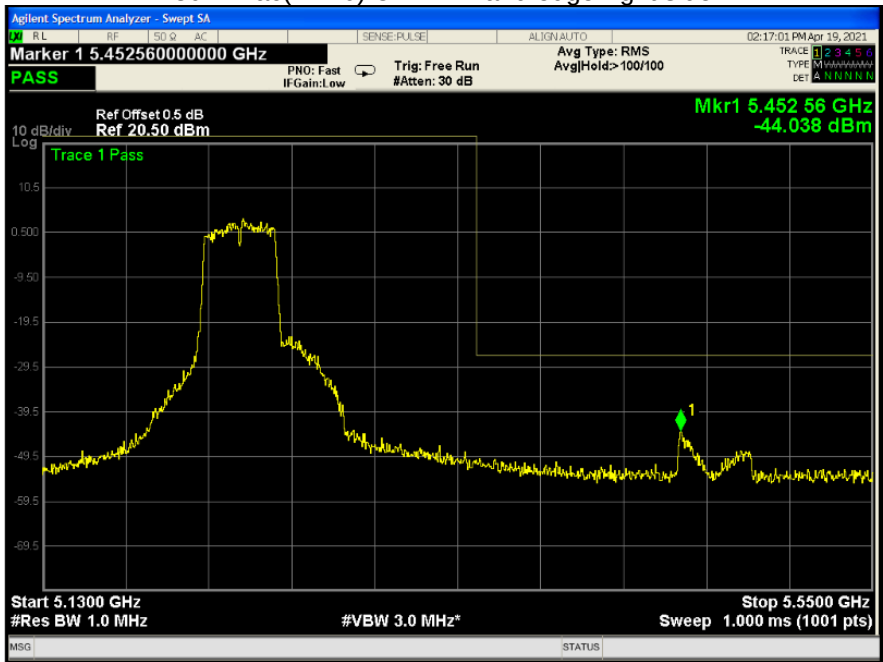
802.11ac(HT20) U-NII-1 Band edge-right side



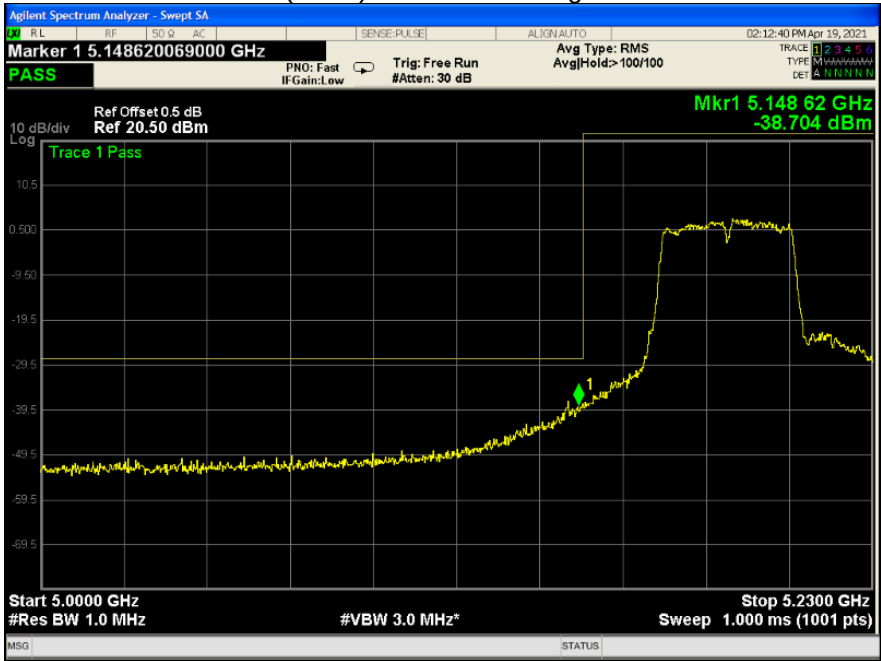
802.11ac(HT40) U-NII-1 Band edge-left side



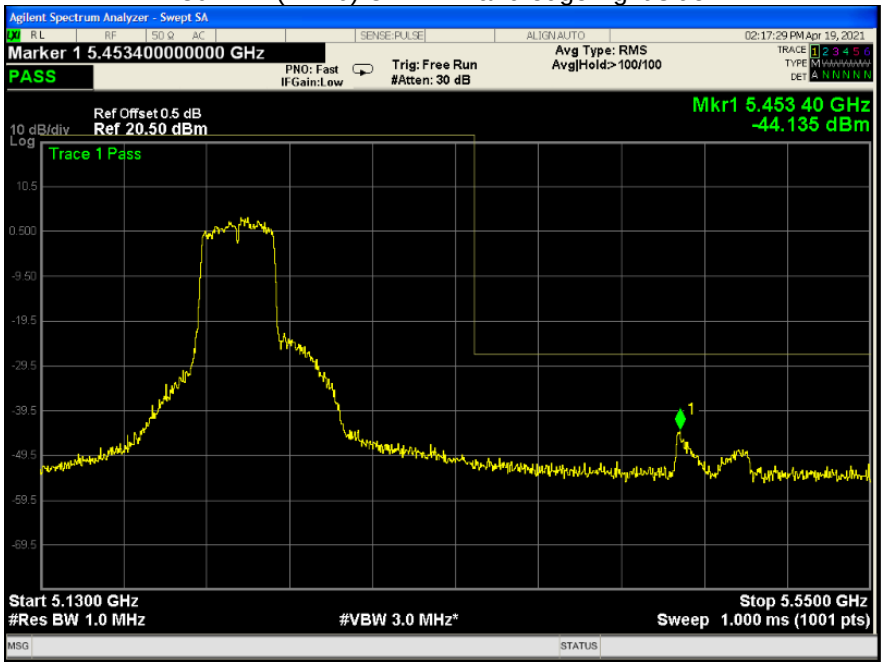
802.11ac(HT40) U-NII-1 Band edge-right side



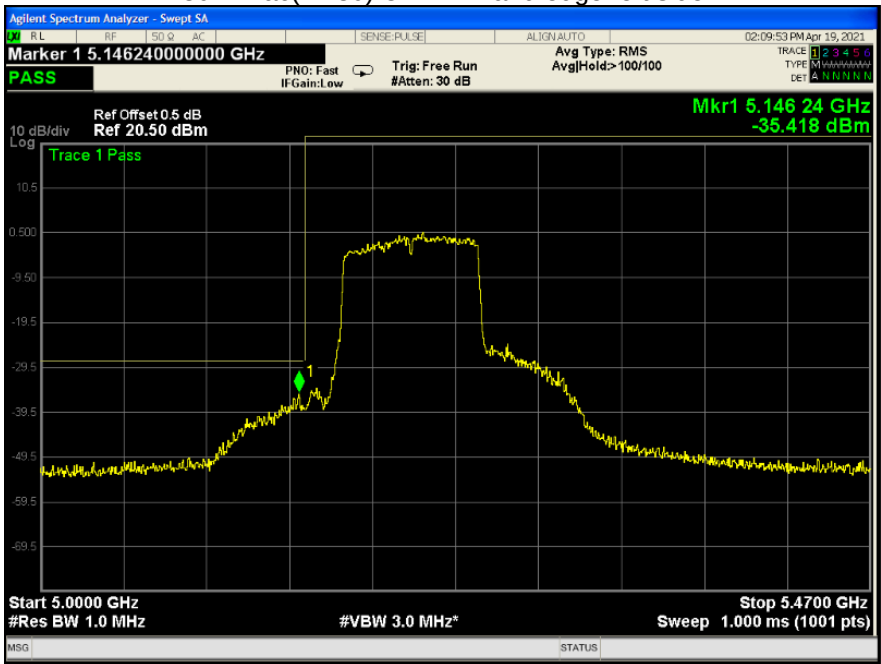
802.11n(HT40) U-NII-1 Band edge-left side



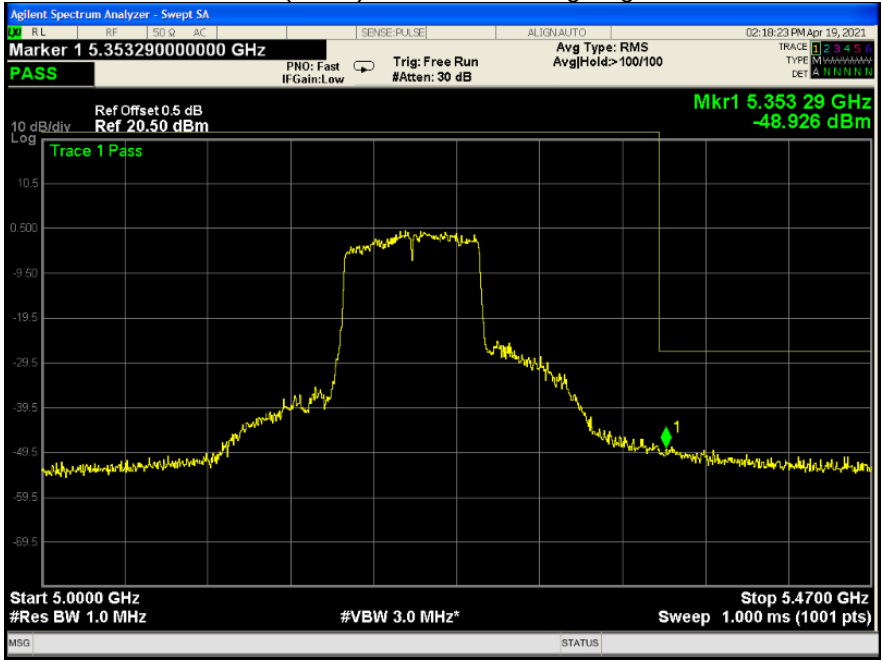
802.11n(HT40) U-NII-1 Band edge-right side



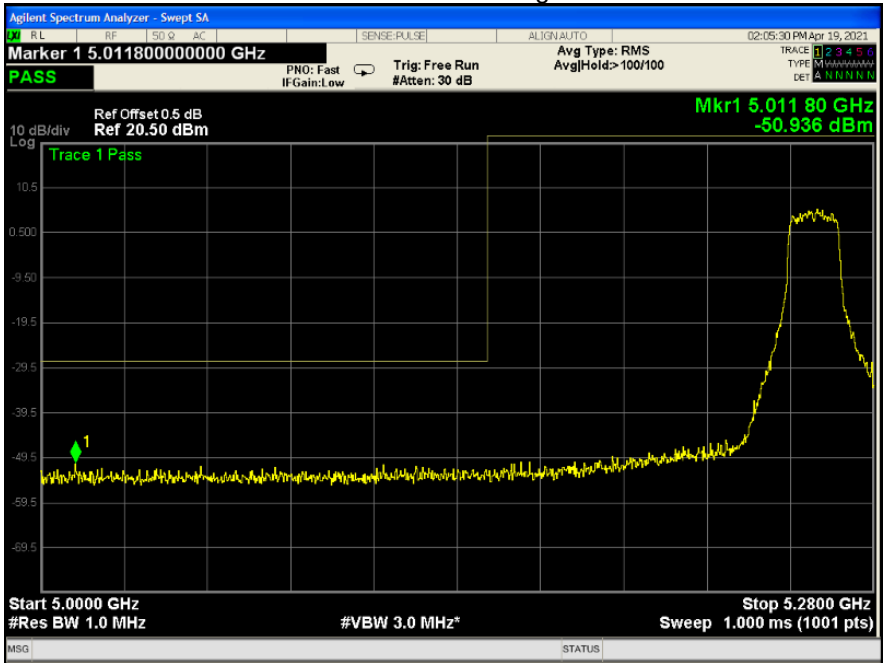
802.11ac(HT80) U-NII-1 Band edge-left side



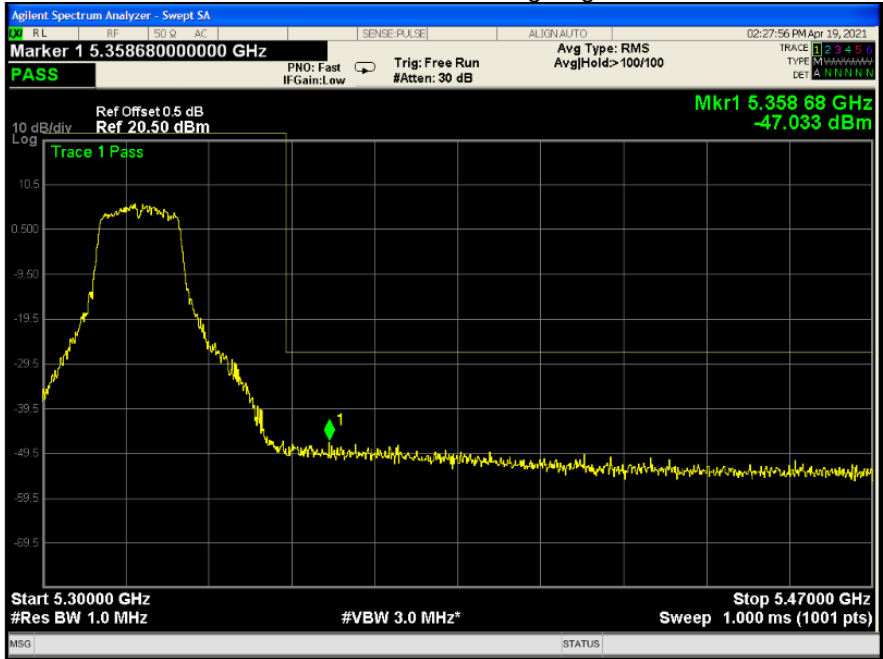
802.11ac(HT80) U-NII-1 Band edge-right side



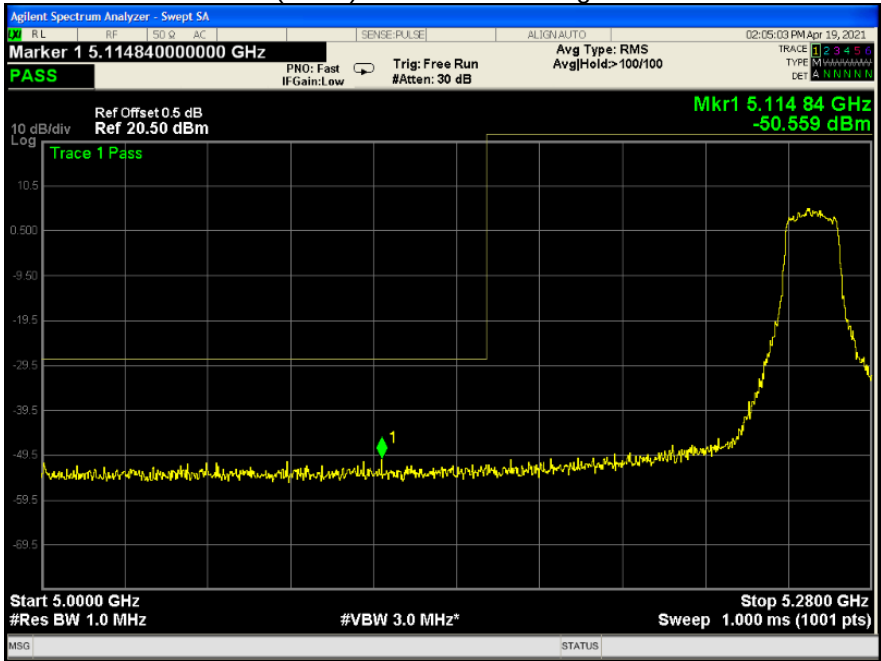
802.11a U-NII-2A Band edge-left side



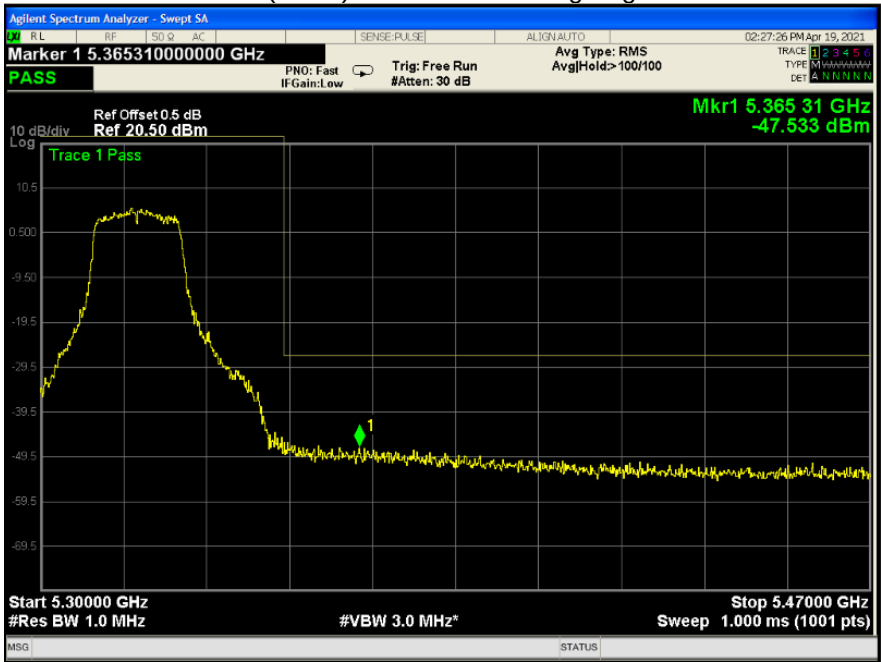
802.11a U-NII-2A Band edge-right side



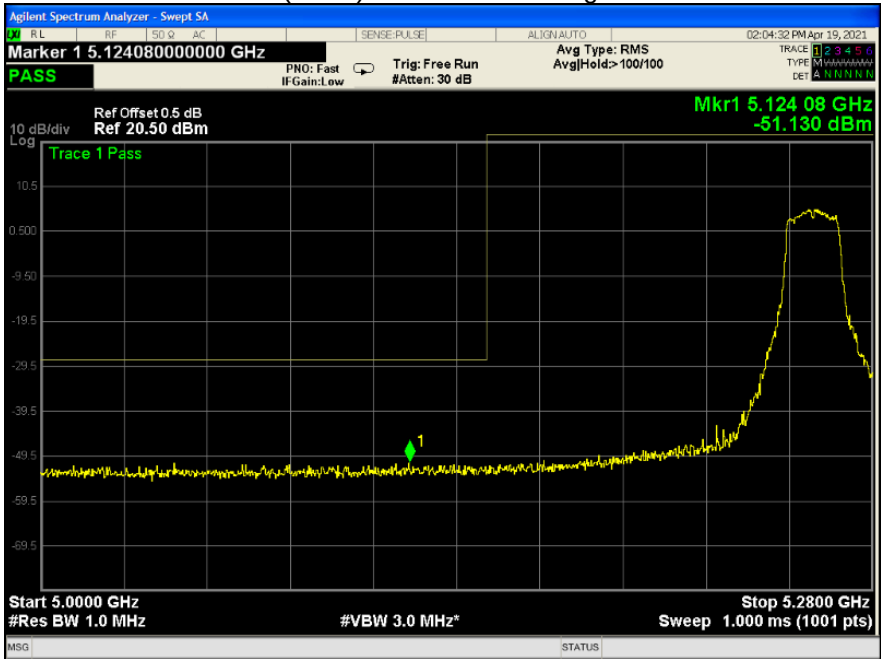
802.11n(HT20) U-NII-2A Band edge-left side



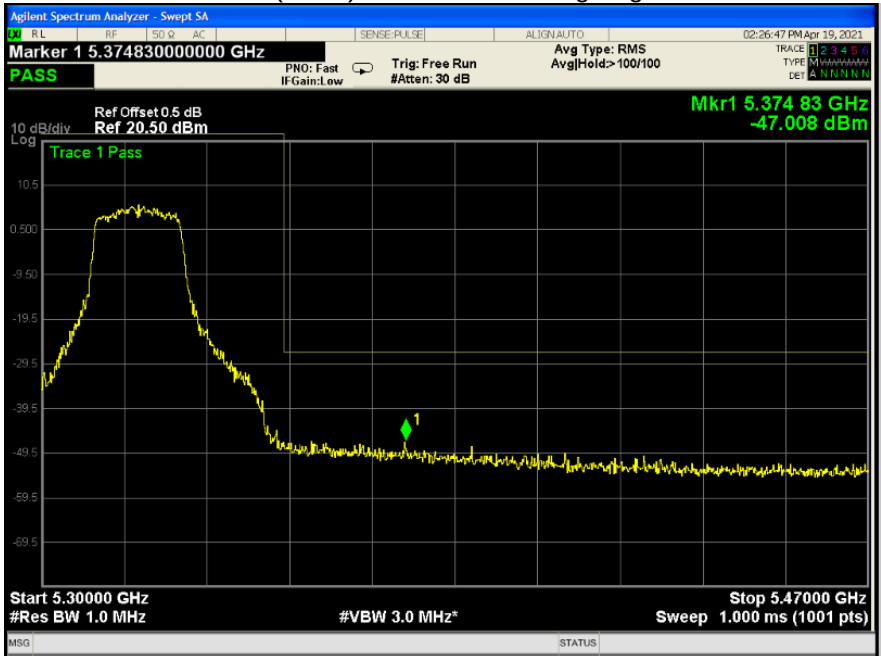
802.11n(HT20) U-NII-2A Band edge-right side



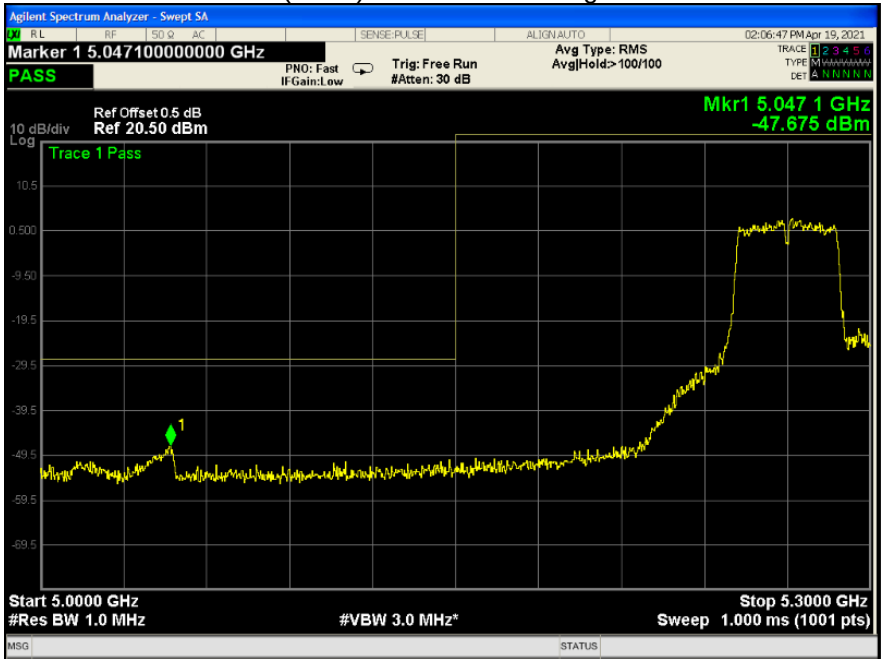
802.11ac(HT20) U-NII-2A Band edge-left side



802.11ac(HT20) U-NII-2A Band edge-right side



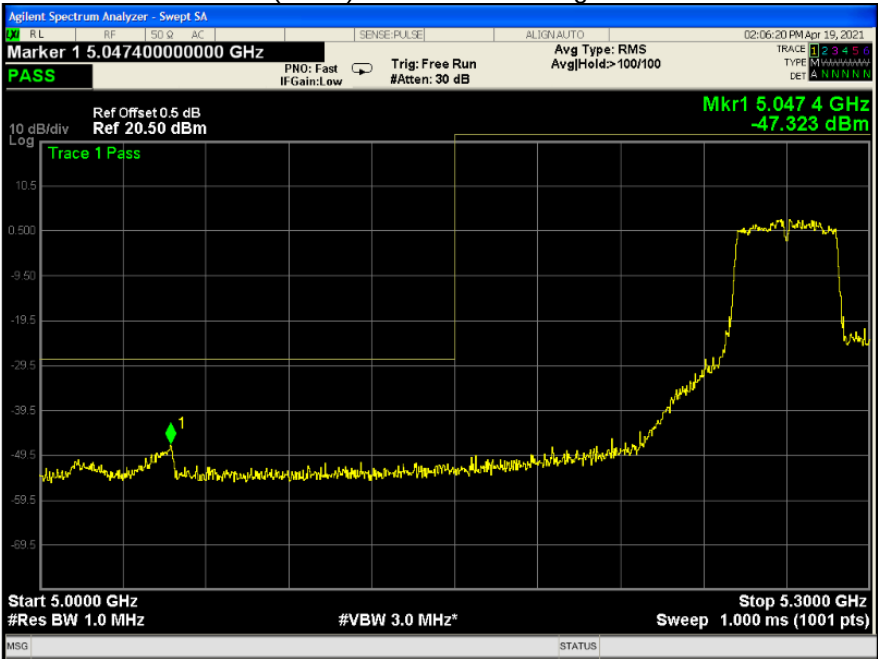
802.11ac(HT40) U-NII-2A Band edge-left side



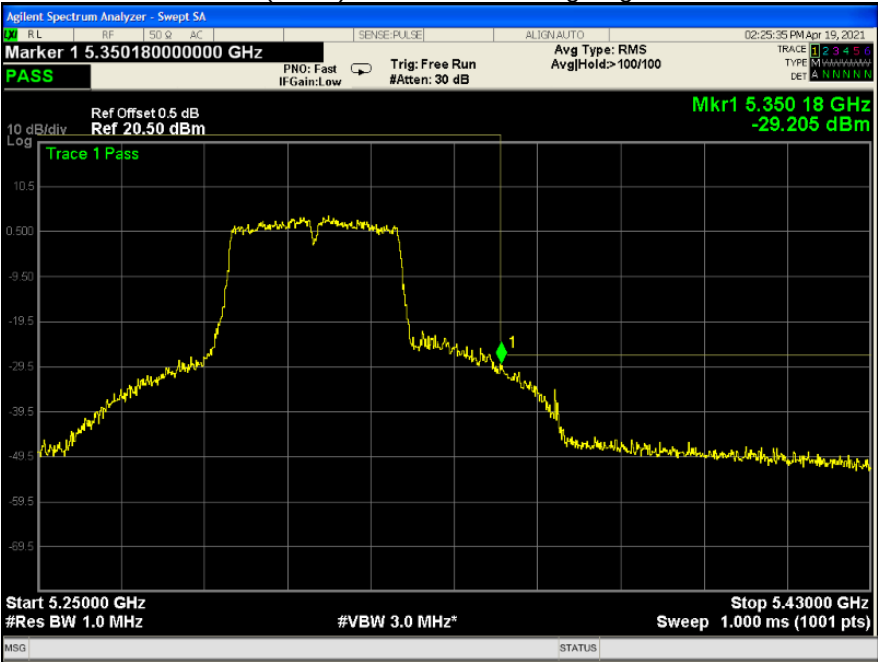
802.11ac(HT40) U-NII-2A Band edge-right side



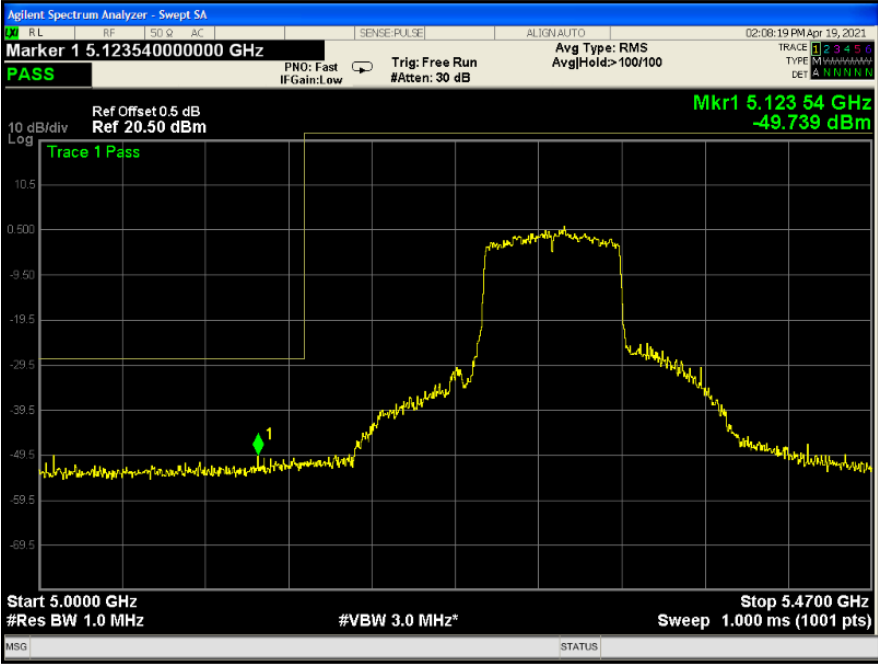
802.11n(HT40) U-NII-2A Band edge-left side



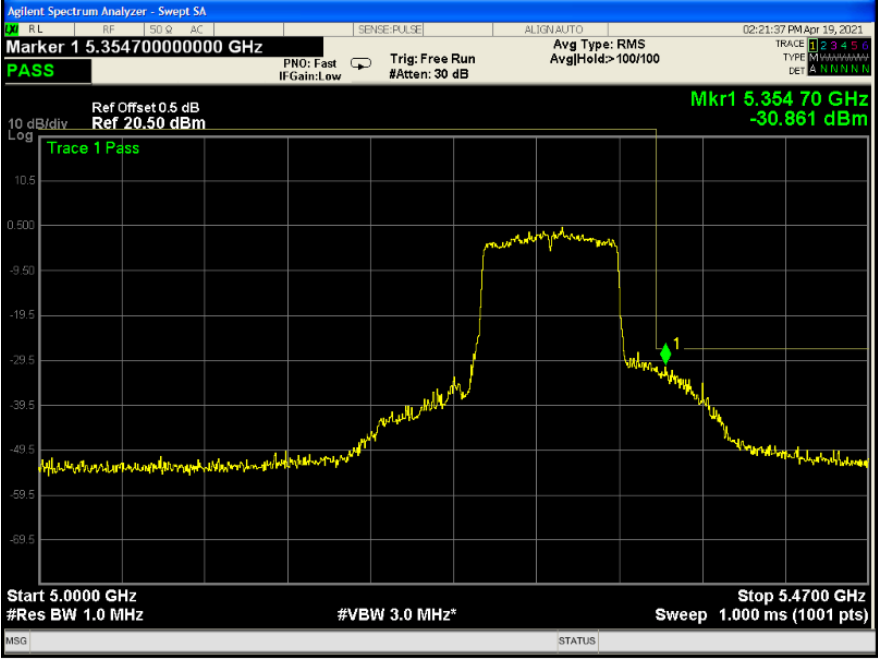
802.11n(HT40) U-NII-2A Band edge-right side



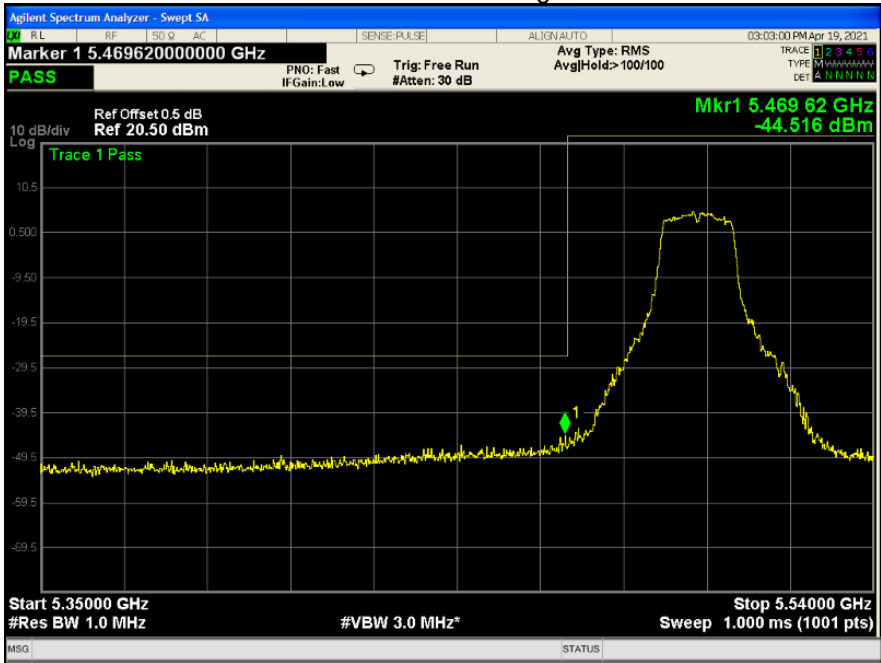
802.11n(HT80) U-NII-2A Band edge-left side



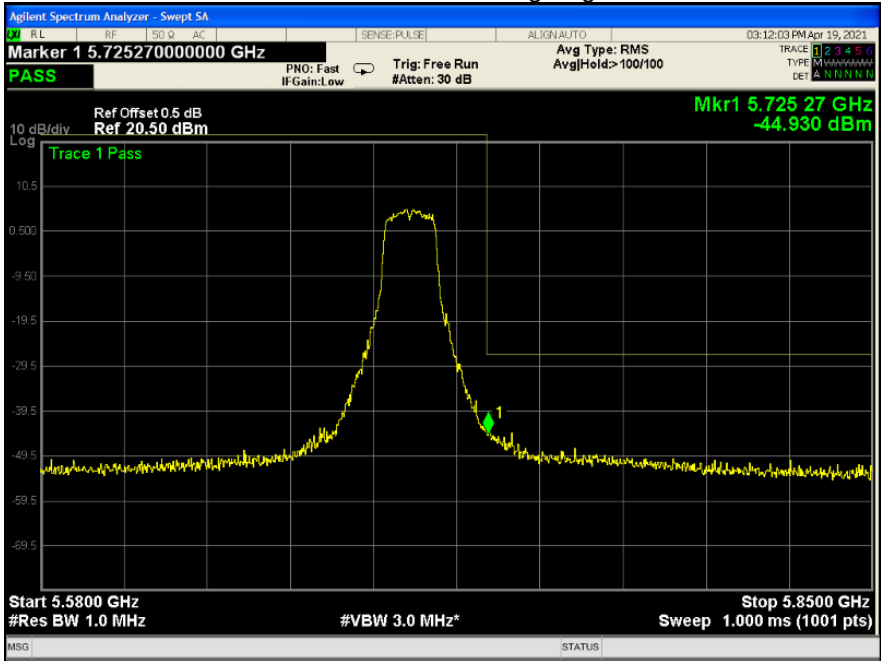
802.11n(HT80) U-NII-2A Band edge-right side



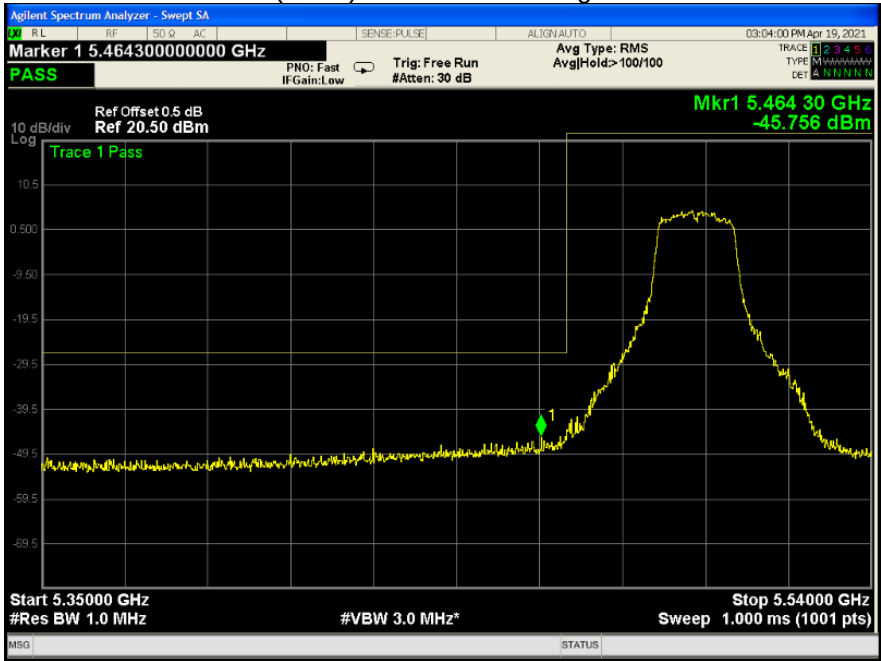
802.11a U-NII-2C Band edge-left side



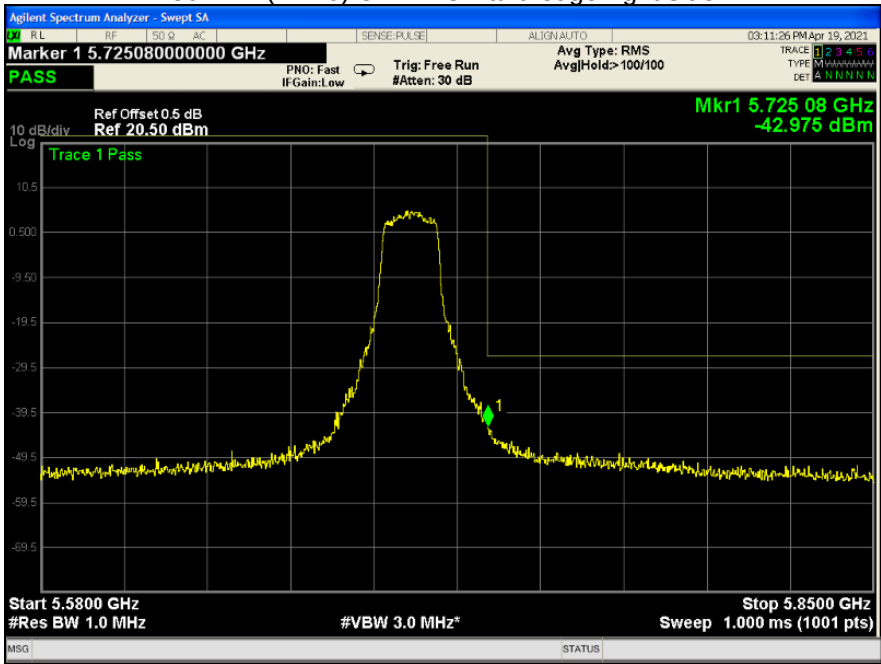
802.11a U-NII-2C Band edge-right side



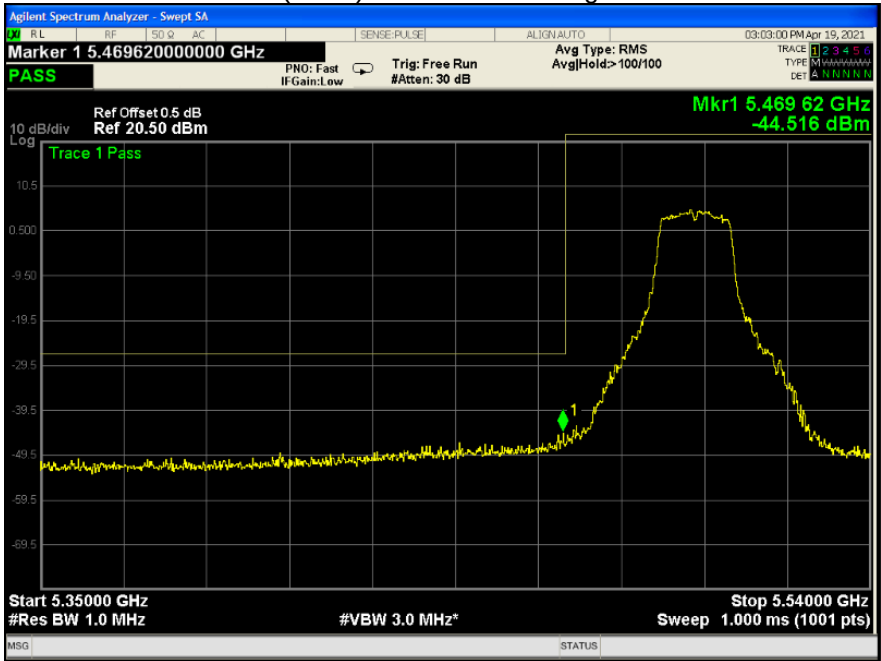
802.11n(HT20) U-NII-2C Band edge-left side



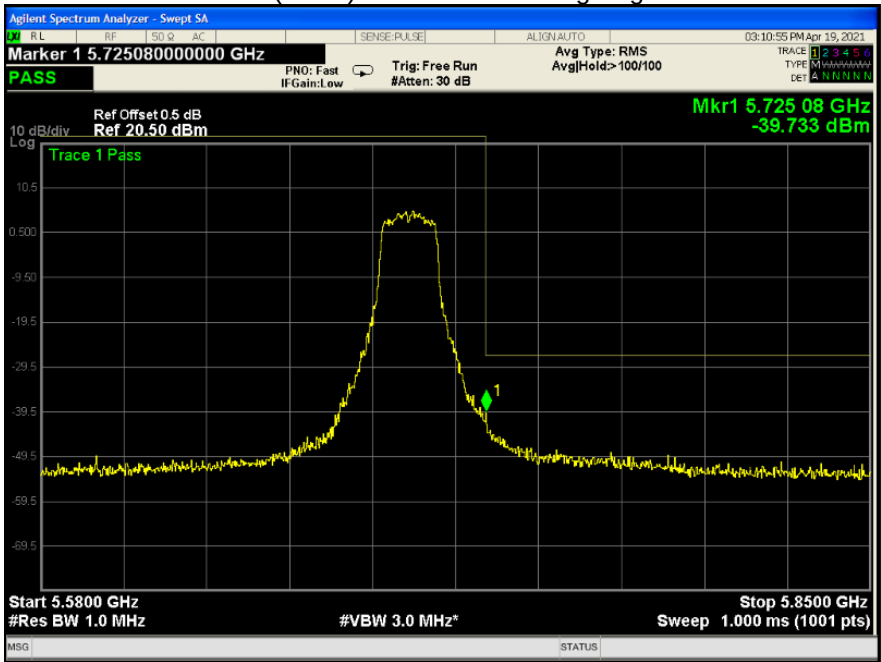
802.11n(HT20) U-NII-2C Band edge-right side



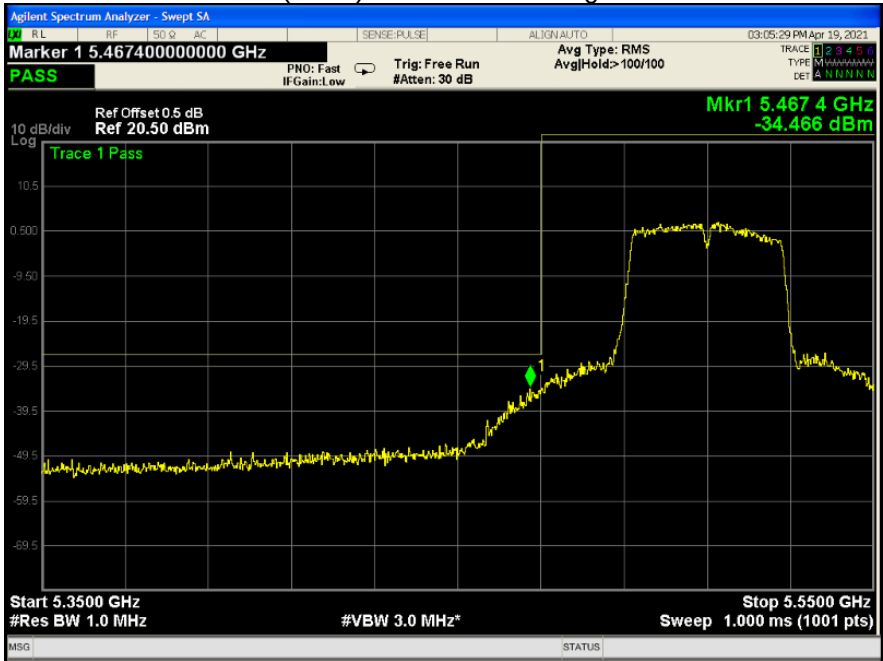
802.11ac(HT20) U-NII-2C Band edge-left side



802.11ac(HT20) U-NII-2C Band edge-right side



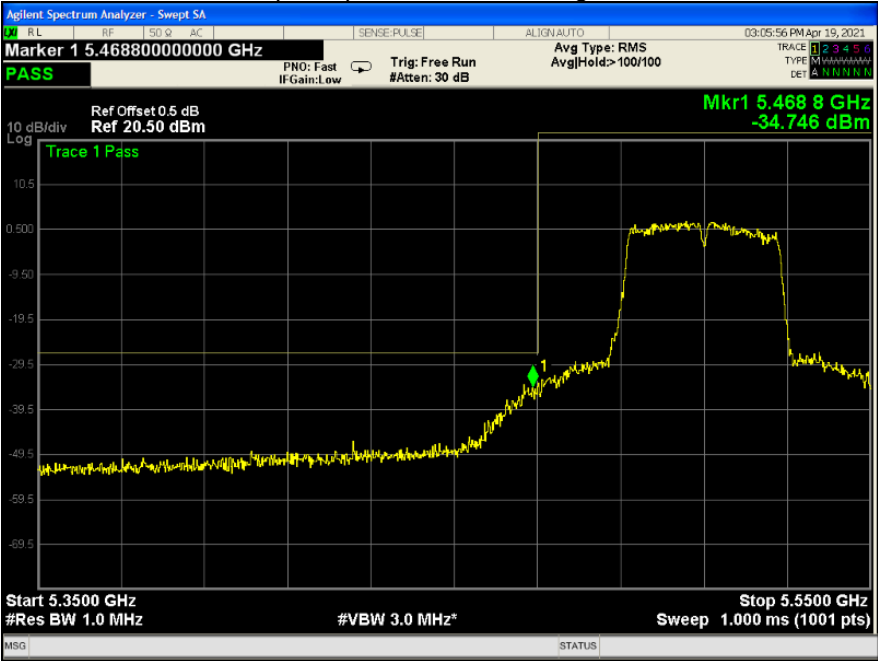
802.11ac(HT40) U-NII-2C Band edge-left side



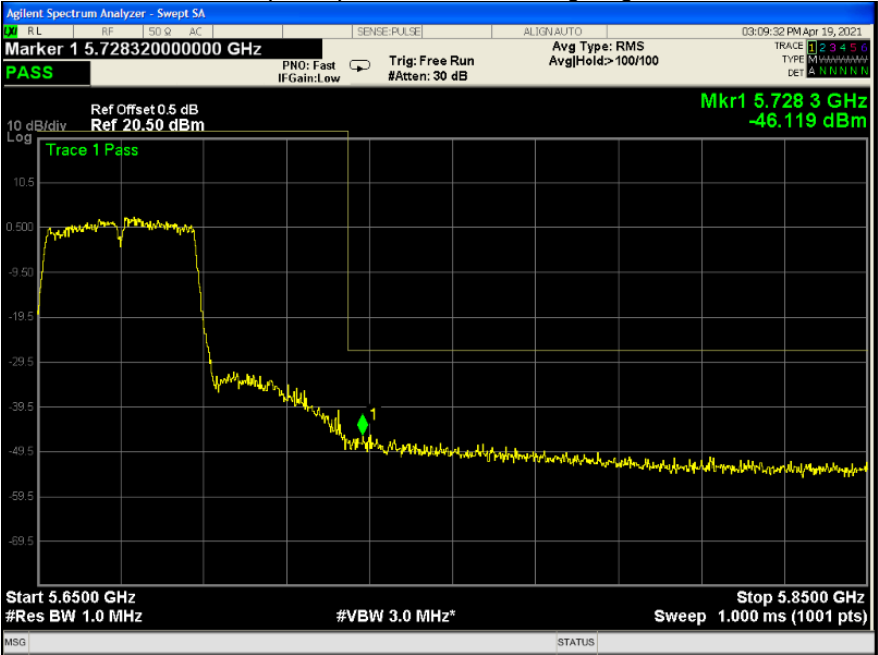
802.11ac(HT40) U-NII-2C Band edge-right side



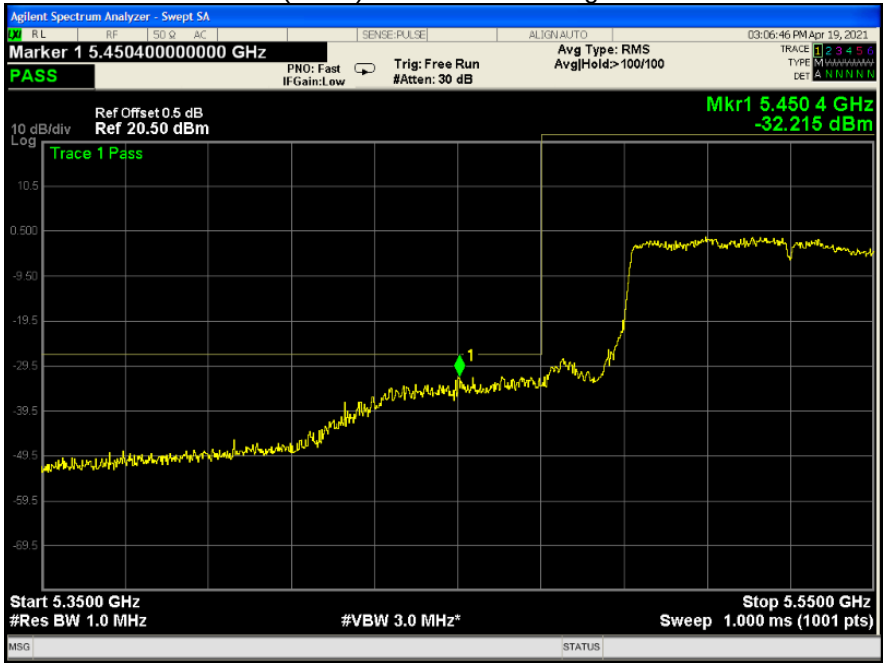
802.11n(HT40) U-NII-2C Band edge-left side



802.11n(HT40) U-NII-2C Band edge-right side



802.11ac(HT80) U-NII-2C Band edge-left side



802.11ac(HT80) U-NII-2C Band edge-right side

